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A Lecture on the Promotion of Agricultural Improvement,

Read before the MARYLAND AGRICULTURAL SOCIETY for the Eastern Shore, and the FARMERS' INSPECTING ASSOCIATION OF TALBOT CO. at their Joint Annual Meeting and Cattle Show and Fair, Nov. 15, 1850.

BY EDMUND RUFFIN.

PUBLISHED BY ORDER OF THE TWO SOCIETIES.

On the occasion of the Annual Joint Meeting and Cattle Show and Fair which was held on the 13th, 14th and 15th of November, 1850, by the two Agricultural Societies of Talbot County, Maryland, EDMUND RUFFIN, Esq., of Virginia, having delivered the Lecture, on motion of Samuel Hambleton, Jr., Esq., it was resolved, that a committee of three be appointed to wait on MR. RUFFIN, and solicit a copy of his Lecture for publication. Whereupon, Saml. Hambleton, Jr., M. Tilghman Goldsborough, and Samuel Chamberlaine, Esqrs., were appointed the Committee.

SAMUEL STEVENS, *President*,
M. TILGHMAN GOLDSBOROUGH,
Secretary of the Board of Trustees of the Md. Agr. Soc. for the Eastern Shore.
JOHN W. MARTIN, *President*,
JAMES G. THOMAS,
Secretary of the Farmers' Inspecting Association for Talbot County.
EASTON, Md., November 15th, 1850.

Gentlemen—Members of the Maryland Agricultural Society for the Eastern Shore, and of the Farmers' Inspecting Association for Talbot County:

Although an old man, I am still a novice in the art and practice of public speaking. Indeed, this will be my first effort to address, in set form of words, or otherwise, any large assemblage. Under such new and embarrassing circumstances, I trust you will excuse my not attempting to act the orator, and not assuming, in the least, even the manner of public speaking—and permit me to address you by way of lecture, and simply and plainly reading my remarks.

The honor which you have conferred on me, by your invitation to deliver an address before this meeting, is highly appreciated. But your favorable estimate of my ability to serve you in this respect, does not blind me to existing causes of unfitness for the duty which, at your request, I have undertaken to perform. An address to an agricultural association or meeting, if of any use, should convey instruction applicable to practical purposes; and for that end, the speaker ought to have some acquaintance with the farming practice of the district represented by his auditors. This important requisite is wanting in the present case. For before this occasion, I have never visited the Eastern Shore of Maryland, nor had the personal acquaintance of one of its farmers or residents.

Such want of all previous personal, or any other intimate acquaintance, must certainly operate as a great diminution of any possible value of the advice or instruction which a stranger might presume to offer to an agricultural community. But, on the other hand, there are also some advantages in this position, which may partially compensate the defects. I am debarred, by the want of particular acquaintance, from discussing before you, as would otherwise have been preferred, some subject of agricultural practice—or of argument bearing directly upon practice. As the nearest approach permitted by the present circumstances to such subjects, I have chosen to treat of the means for promoting the improvement of agriculture by the aid of government, or of voluntary associations of individuals. To discuss this subject with proper freedom will involve the necessity of censuring existing errors, either of commission or omission, by governments, by agricultural societies, and perhaps by individuals. Any such censure which may appear in the course of my remarks, must necessarily have been suggested by occurrences in other localities; and cannot be supposed as designed to apply to any in this assemblage, or even in all Maryland. Being thus exempted, by my position, from the charge of designing to rebuke any particular cases here, I shall be the more free from restraint in offering general remarks—which, for all the utterer can know, may or may not be applicable to any of this audience.

However slight may be my acquaintance with the particular features of this part of the country, I cannot be mistaken in supposing that there is a general and remarkable similarity of the whole of this great Atlantic tide-water region, of Maryland, Virginia, and as far south as Georgia. Various as are the soils, there still is found a general uniformity of character, which is the result of a like original and peculiar geological formation. With many minor exceptions to every general character, the lands of this great region are easy to cultivate, to drain, (and rarely need drainage,) and to enrich with certainty and profit. They are in many or most cases, underlaid with beds of marl, and are intersected by many navigable rivers. Fertility is easily retained for, or restored to, the lands which possessed it naturally—and can be cheaply and profitably introduced upon the naturally poor soils; which otherwise are of little value. The facility for this latter operation is due to the peculiar want of lime in all these soils, and their consequent peculiar fitness to be benefited by the application, and to the general cheapness and ease for applying, in one or other of its available forms, that most valuable of all manures. The wheat-producing part, especially, of this extensive territory, taken altogether—and with reference to all the existing and available advantages, and also to the peculiar disadvantages, whether fixed or remediable—is the most valuable agricultural region within my knowledge. And within this closer though still very extensive limitation of confines, I believe this portion of the Eastern Shore of Maryland is the very best spot of this best region. In this great region, the improvement of soil, the increased production of crops, and of farming capital, ease and profit in the business of farming, all may be obtained. The present occasion permits merely this bare enunciation of these several propositions. But they can be sustained by ample proof, furnished in facts, and sound deductions from facts. Such proofs I have before attempted to establish, and I trust with some success. And to these attempts, in different publications, I must be content now to refer any hearers who may deem the above asserted propositions as either novel and unsupported, or exaggerated or altogether erroneous.

Notwithstanding the great agricultural advantages of this region, the prices of lands are still very low, though much advanced, and yet advancing, where these advantages are best understood and appreciated. A low rate of price for lands is always a great discouragement and obstacle to their improvement, and a detriment to the interest of the proprietors. But the existence of this low price is also a great additional inducement to other persons to seek such investments of capital—and is an important element in the large profits of farming investments and labors there to be obtained.

While there are many farmers in this region who have achieved improvements of lands, and realized profits on their capitals, which would be deemed a remarkable and rare measure of prosperity and gain in any safe business, yet there are perhaps twenty times as many others, possessing equal facilities, who have made but little annual profit, and no improvement of their lands. These opposite results are owing to the difference of knowledge possessed by different farmers, and the want of instruction for the greater number—a difference and a want which belong to farming in very far greater measure than is possible in regard to any other pursuit of industry. It is true, that in all these pursuits, the undertakers vary in their measures of knowledge, skill and industry; and, other circumstances being equal, their measures of success will be proportioned to their degrees of superiority in these respects. But however varying in the measure, or application, every man who pursues any business of handicraft, commerce, manufactures, or navigation, must use the proper and best means and facilities and skill required for his particular business, or he cannot compete with his fellows and rivals in trade, and must speedily and inevitably be ruined. In farming only, men continue to live by their business, and some, by great toil and frugality, even thrive and grow rich, though ignorant of, and unaided by the greater number of the facilities which the better-informed use to great advantage and profit. That the former class can make even the most moderate profits, is alone enough to indicate how much greater must be those realized by the most successful, and which might be obtained by all.

The great and universally operating evil suffered by agriculture, in this country, is the *want of knowledge*. To supply this want, by proper instruction, should be the single aim, (however diversified the manner and means,) of government, or of any voluntary associations of individuals, if designing to best promote agricultural improvement and agricultural interests. And for this great, this all-important object, but little has yet been effected by agricultural societies, (because of mis-direction of effort,) and almost nothing by governmental action. There has been, indeed, and for considerable time, a miserable pretence of such aid being rendered to agriculture, by the Congress of the United States, in the annual publication of the (so called) Agricultural Report prepared in the Patent Office. It has been said that the mere printing of this document has cost the treasury as much as $80,000 in one year; and the only effect of the publication, if not the main object, has been to give the enormous treasury-sop constituted by the cost, to government printers, and, in smaller portions, to other receivers of such bounties. Even the half of this large expenditure, if directed properly for the diffusion of agricultural knowledge, could not fail to produce most important benefits to agriculture and to the country at large—benefits which would perhaps exceed a hundred-fold the amount of the annual cost. But the only results of this pretended aid to agriculture, and real waste of public money, has been the annual issue of a collection and compilation of the most contemptible and worthless description, if considered with reference to its dignified source, and great cost. It is true that there exist constitutional limits and obstacles to this kind of action by the federal government, and which I, for one, have no wish should be disregarded—but which this is not the occasion to discuss. But, whatever may be the force of these difficulties, there cannot be less of obedience to constitutional restrictions in the government's arriving at the professed object of affording aid to agriculture directly, rather than indirectly—or in publishing and diffusing useful information, rather than useless trash—or that the large actual annual appropriation shall truly and greatly promote the good end professed as its object, rather than be spent, as heretofore, in fruitless waste. Besides—Congress has assumed the care and administration of the rich Smithsonian Fund, of which the designed purpose

is "to increase knowledge among men." And, surely, no kind of knowledge so much needs aid, or whose increase and diffusion would be half as beneficial to our people, and to mankind, as that of agriculture.

Some of the State governments have done something to aid agricultural improvement; and among these, the government of Maryland has rendered good service, for so small an expense, in employing an agricultural chemist. But this and all other such efforts, whether properly and carefully directed, or the reverse, are but a few and mostly unimportant exceptions to the general and total neglect of the State governments of every means for promoting the improvement and advancing the interests of agriculture.

As a science, agriculture requires much study and research; and as an art, much skill in numerous and various operations. In both these respects, few other pursuits require knowledge or skill in so many different things, or so much require instruction, as agriculture. Yet it is almost the only profession or pursuit which is without any regular or ordinary means for instruction, and in which almost every learner is without a teacher. If, in any other great and complicated business, it was the general course of capitalists to commence as undertakers without any knowledge of the theory or principles —and to employ operatives and superintendents who were as ignorant of the practice—and that for all to acquire the knowledge wanting, reliance was placed solely on their subsequent untaught operations—in all such cases, every voice would pronounce that the business must inevitably end in bankruptcy. Yet this is the course of procedure, nearly to the letter, in almost every agricultural business, whether on a large or small farm. The usual course of the heir, and expectant cultivator, of large landed property, is that he is educated in some town, and far from his future property—and is instructed almost exclusively in dead languages, and afterwards in sciences, few of which can have any practical application to his future pursuits. Perhaps to this general scholastic instruction, the recipient may thereto afterwards add more or less of the study of law or medicine. And all these studies are thrown aside, when the student arrives at manhood, and undertakes his before expected business of farming, with which he is necessarily and entirely unacquainted. Still, a remarkable aptitude for the pursuit may sometimes enable a new proprietor to overcome all the disadvantages of his own ignorance, and that of his agents; and finally to succeed well, notwithstanding such enormous obstacles. But because some few such cases are before us, it is a great mistake to suppose that good farmers can be so formed. It would be not less erroneous and absurd to infer that all education in literary and scientific institutions was unnecessary, because, without such aid, a Franklin could reach the highest station of celebrity in science, and in general and useful knowledge.

But great as are the disadvantages of the wealthy young farmer, they are as nothing compared to those of the far more numerous class of men of small possessions, and of more limited education. The former has leisure, and various facilities, to gather information from others. Travel, reading, frequent and varied social intercourse with his fellows who have become better informed, (or who even if as ignorant as himself, are all striving to learn,) all serve to forward the instruction of the farmer who can command these resources. But the small or poor farmer, who is confined to his daily toil, has no such means, and can rarely derive knowledge from other persons, if surrounded only by neighbors in similar circumstances, and under like disadvantages.

Such are the inauspicious circumstances of the whole class of farmers of our country. The actual results and effects of this universal want of proper training and instruction, are such as might be expected in advance, from merely knowing the causes.

Agriculture is not only untaught, and without any proper means for being taught, but it is the only art or science which is in that destitute condition. For every other pursuit, requiring physical or mental power, every beginner receives early instruction from some person supposed to be well informed, and competent to instruct in the business. This practice is universal, and properly deemed indispensable, from the most simple mechanical labor to the most abstruse scientific study. Farmers, alone, are expected to understand their art without instruction—and indeed almost without any available and proper means for obtaining information.

Nearly all our State governments pay more or less, and some of them large amounts, in aid of many branches of education. What are these amounts is not necessary to my argument; and I have not referred recently to any statistics on this subject. In my own State, Virginia, the annual payments from the treasury, in aid of education, cannot be much short of $100,000. This expenditure is principally for the primary schools—and next, for the University and the Military Institute —and lastly, in the interest of nominal loans, but real gifts, to a Medical College, and to some other colleges of minor grade, or rather high schools Thus, the government pays for instruction in the lowest elementary learning, in the dead and also living foreign languages, in all the sciences usually taught in colleges of high order, and also in medicine and law. But not a dollar is paid for instruction in agriculture, or for aid to agriculture in any way. It is far from my design to object to this heavy expenditure for education, so far as it is properly directed—or to even twice the amount, with the same condition of proper direction. But this I will say and maintain—that even if directed and used in the best possible manner for promoting the particular branches of education proposed, any portion of the whole expenditure, whether one tenth or one-half, would be far more beneficially and profitably bestowed in judiciously aiding agricultural instruction and improvement. The direct and earliest effect of such aid to agriculture would be to increase the profits and wealth of every instructed farmer, and of course the wealth of the whole community. But this would not be all. This increase of prosperity, and of means, to numerous individuals, would induce a large addition to their previous expenditures for the scholastic education of their children. And thus they would return to the use of scholastic education itself, much more than any amount which they had before received from the treasury, for agricultural instruction.—Every person who hears this assertion, can refer to some facts in proof, if he is acquainted with any locality where great agricultural improvement has been produced. When, by such improvement, farmers' products have been doubled, their surplus or disposable funds (that is, the excess over all required for absolute necessaries,) will be much more

increased, and may be even ten-fold greater than before. It is out of this surplus or disposable profit only that the expense of education is usually defrayed. Hence, a farmer with a small income who might find it difficult to spare $50 yearly for the education of his children, could more easily afford $300, by his land being so improved as to yield only a doubled gross product. And, in the general, such largely increased expenditures for education will as certainly result from increased agricultural production, as will any other new expenses. I well know a neighborhood, formerly of poor and impoverished lands and wretched products, which has since been raised to tripled or quadrupled farming products and capital—and, it may be inferred, to more than a ten-fold increase of net-profit, and disposable funds for annual expenditure. This neighborhood was among the first in Virginia where marling was practised extensively; and by this means, (though far from being always judiciously used,) the great improvements of income have been cheaply produced. The results have not only been greatly increased expenditures for objects of comfort and luxury—but also a liberal support of schools and of the services of religion, exceeding more than twenty-fold all that formerly had been paid for both. For literary and scholastic education alone, this growth of agricultural prosperity has done more in the community referred to, than twenty, or perhaps a hundred times its share of the State's bounties for education could have produced. This benefit to education in schools, is but one of the many produced by mere agricultural improvement in the locality referred to. The comforts of living—social enjoyments—mental and moral improvement—refinement of manners—all have kept advancing with the improvement of the soil and its products. If this improvement of agricultural production in this particular neighborhood (to go no farther with the illustration,) had been owing to instruction and aid afforded by the commonwealth—as *might* have been in this case, and *may* be in many other cases—then the commonwealth would have been the gainer even in money, putting aside the other greater advantages not to be computed in money. For, according to the statement just offered, the government bounty given in aid of agricultural instruction would have produced incidentally more benefits of education than any possible amount of grants from the treasury could have effected. And further, the amount of pecuniary aid which might have been given by the government at first for this agricultural instruction and improvement, would be fully reimbursed to the treasury, in the subsequent larger amount of taxes derived from the new capital thus brought into existence. These inferences are indeed but supposition—though supposed in regard to unquestionable facts. But, with every just allowance for uncertainty of the extent of operation, there can be no doubt that any judicious outlay of public money, given in proper directions to promote agricultural improvement, would return pecuniary profit to the commonwealth, and more than reimburse every individual contributor to the bounty, in greater benefits derived from the improved productions of agriculture, and the consequent increase of public wealth.

As the great disadvantage under which agriculture suffers is the want of knowledge, so the great remedy must be to collect, embody, increase and diffuse information. Every measure, devised for relief, which will serve thus to spread instruction in useful truths, must do more or less of good service to agriculture. And every act of government, or of a voluntary association, designed for, or professing to aid agriculture, which does not increase or extend useful knowledge, and is not of practical and profitable application, is of doubtful value, if not of actual injurious tendency.

Agriculture is an experimental science. All its known truths were originally derived from experiments, whether made by design or by accident; and the best existing systems of practice have been established entirely on experience and observation of the facts brought to light by earlier experiments. Agricultural books and other publications, which so greatly aid and guide every intelligent farmer, so far as they are trust-worthy, are but the recorded evidence and digests of truths founded on foregone experiments. Yet this only sure guide to knowledge and truth—investigation by accurate experiment—is very generally neglected as means for agricultural instruction and improvement. The different branches of natural philosophy and chemistry have been studied by experimenting, almost exclusively, since the beginning of Newton's illustrious course of research and discovery; and the sciences so studied by the bright and steady light of experiment, have made more progress in each year of latter times, than in any century previous to the great Bacon, who first directed the proper mode for investigation. Previously, these sciences had made very little progress. Every person who then attempted their investigation, and reached any celebrity as a teacher of science, merely maintained by plausible argument some baseless hypothesis, for the purpose of explaining the mysterious phenomena of Nature. Each of such hypotheses, in its turn, had its disciples and zealous supporters, until it gave place to some later and more plausible and yet equally baseless doctrine. Thus, though there was no lack of either theorisers, students, or controversy, there was almost nothing learned in the thousands of years which preceded the commencement of investigation by experiment. Since, this only sure mode of study has been most successfully applied to all the branches of science to which it is adapted, except to agriculture—which as much needs to be studied by experimenting as any other science, and which would not less readily reward such researches, by the discovery of new and important truths. In the main, and with some exceptions which will presently be stated, the manner of investigation in agricultural science is still the same as that which attended and obscured all other physical science in former time. It is true, that as the life of every farmer is spent necessarily in agricultural operations, he can scarcely avoid making and observing some experiments, though without design, and perhaps by mere accident. Some of these chance-produced results are correctly understood by the observers, and so become, for the future, useful parts of their practice founded on experience. A still smaller portion of such results may be heard of abroad, or possibly the reports may get into print, and so may serve more speedily to instruct many other and remote learners. But generally, few experiments are attempted; and, of these, the greater number are conducted or observed with so little regard to accuracy, that the results can rarely be relied upon, even if made known to the public—which end is more rare than even the making of correct experiments. With all the aid so derived from such experimental investigation as has been

made, and continues to be made, the teachers of agriculture still proceed mainly as did the early teachers of natural philosophy, by mere theorising, and opposing by argument one theoretical doctrine to another; both being very insufficiently sustained by the only sure tests of truth, actual and correct experiments. Hence, agriculturists only, in modern days, continue to grope through the obscurities of merely theoretical doctrines, and opinions resting upon supposition, or at best, on partially understood, or mistaken facts. Some one starts a new doctrine or system, in reference to tilling or improving the soil—every speculative farmer or writer becomes either an advocate or opponent of the new doctrine or practice—volumes may be published in the controversy—and perhaps after fifty years of argument, and of conflicting agricultural practice under the opposing opinions, it still remains undecided as to what extent either of the opinions is true and useful, or false and pernicious. For it generally happens in such cases, that neither opinion is altogether true, or altogether false; and that both the opposite practices may be either right or wrong, according to difference of circumstances. The comparative merits of sowing wheat broadcast and in drills—of naked fallow or fallow-crops, to prepare for wheat—of using barn-yard manure in a rotted or unrotted state—of ploughing deep or shallow—and of many other ordinary and opposite practices—have been warmly disputed in Britain and in this country for many years, without being decided. In every such question, (and of such questions and discussions almost all agricultural teaching has mainly consisted) twenty or a hundred properly conducted experiments, made under every known difference of circumstances, would probably have established the disputed truth—or, at least, would have approached the truth more nearly than all the arguments that could have been presented in fifty volumes—or in fifty years, and with as long agricultural practice of both the opposing parties—if without the aid of investigation by correct experimenting.

If, among those who have heard these expressions, there are any who are neither farmers nor experimenters, this question will probably occur to their minds: "If so much benefit is to be derived from the making of experiments, why is not every intelligent cultivator also an extensive experimenter?" The answer is, that the whole cost of every experiment must be borne by its conductor; while, of the benefit derived from its result, he would but share in common, according to the extent of his capital and operations, with the whole agricultural community. Thus, experiments which would teach useful truths, and which might be worth millions to the whole agricultural community, might not, in the experimenter's share of the wide-spread general gain, yield enough to reimburse his actual loss and risk incurred in making the experiments. Still less favorable to his interest would be nineteen-twentieths of any great number of experiments, which would yield no benefit whatever to the maker, and of course their cost would be total loss. Still, the results of all such experiments—though deemed failures, and which, being not valued for the results, are soon forgotten—if recorded, would be of much value to the public—if only in preventing future efforts being directed in the same profitless way. It has indeed happened, in rare cases, that the result of some one experiment, or series of experiments in agriculture, has so enlightened the maker, as greatly to increase his farming profits and his capital. But where one such case has occurred of rich reward to the individual experimenter, there had been probably a hundred other experiments in which the whole expense was lost.

To plan and conduct an agricultural experiment correctly, so that the results may be relied upon, requires much care, judgment, habits of accurate observation, and also long time and expensive means. Unlike the chemist or natural philosopher, the agriculturist cannot prescribe all the materials, and direct precisely the manner of his experiments. The variations of soil, climate, season, &c. introduce different and often unknown elements into almost every agricultural experiment, so that repetitions under various circumstances, and for many years, may be necessary to confirm the results. Hence, *complete and sufficient* experiments in agriculture can rarely be executed by any private individual—and are almost never attempted—because of the required cost in time, labor and expense. Nevertheless, in despite of loss, discouragement, and ridicule, there are always many experimenting farmers, whose losses are generally in full proportion to the extent of these operations. Yet, to their labors, however detrimental to their own interests, agriculture and the public weal are indebted for nearly all the advances made in improvement.

Upon the grounds which have been stated, I am content to rest my position that the great want of agriculture is instruction. I will now proceed to the last question designed to be here considered—the best means for affording agricultural instruction, by governmental or other associated effort. And for this purpose, it is unnecessary to distinguish between these, or any other sources, from which such benefits may flow. Whether the aid shall be due to the wisdom and liberal views of the government, the enlightened self-interest of the great community, or to the patriotism, public-spirit and generosity of the comparatively few individuals acting in voluntary associations for agricultural improvement, is unimportant—so that the means offered are sufficient for the purpose, upon either a small or a great scale of operations, and that they are judiciously applied.

Neither is it necessary here to suppose any certain amount of annual appropriation, and a plan of disbursement suited to that amount. If the sum appropriated were no more than $1000, it could be used very advantageously for the object in view; and if $50,000 were offered, all could be disposed of with benefits proportioned to the amount. Without regard, then, to the amount of means, or the source of supply, I will mention, in the cursory manner which this occasion requires, and only permits, sundry measures which seem well adapted to the ends in view, and of which any one, or all, may be put in use, according to the amount of funds at command.

I. *Farmers' Clubs, or Meetings for Conversation Discussions.*

In commencing a general system of operations for agricultural instruction, the first care should be to collect, and then diffuse, the agricultural knowledge already possessed by scattered individuals.—There is scarcely an observing farmer who has not ascertained some facts, which were unknown to all other persons. Each one of these facts, alone, might be of no great value. But the whole mass

of such fruits of experience, whether of facts or opinions, would afford much instruction and benefit to farmers generally. The diffidence of plain though sensible farmers will almost always prevent their offering their observations to the public in writing; and therefore the truths which they may ascertain are slowly and with difficulty spread abroad, even when of great importance; and thousands of useful observations, of minor importance, will never be made known generally. But however reluctant to write, all farmers are ready to state their opinions in conversation. The harvest of these opinions and facts might be gathered by an agricultural commissioner, or surveyor; who should visit every county, and invite meetings of farmers to discuss and give their views on stated subjects, in free conversations—and who should record the substance of the information so obtained, for future publication. This plan of "Farmers' Clubs" for conversation discussions, has been adopted extensively in Britain, and to great benefit—and to less extent in this country. The proceedings of such meetings, whether of temporary or permanent organization, are sure to be interesting to the participators; and the published reports are always among the most interesting matter that an agricultural publication can furnish to its readers. If even these humble means for affording agricultural information, were alone adopted, and properly used, the beneficial results would be greater than the working of any more ambitious plan yet attempted in this country.

II. *Agricultural Surveyors and their Reports and Lectures.*

The functionary employed to organize conversation meetings, and to record the information so elicited, could also, by personal examination and inquiry, (or acting as an agricultural surveyor,) learn and report the condition of agriculture, its improvement, and every practice deserving to be imitated. Such labors, in sufficient time, and with proper aid, would furnish materials for a general report of the agriculture of the country. The delivery of lectures on different subjects of practical and scientific agriculture, by the functionary in question, and by his assistants, at the meetings of farmers called, would still more increase the interest and the utility of the general plan.

III. *Agricultural Societies, and their Premiums.*

The neighborhood clubs, or less formal meetings of farmers for special purposes, just referred to, would by no means supersede the action and different kind of utility of agricultural societies, established upon a proper plan and more extended scale of operations. The great object of every such society is to improve agricultural practice. The means by which they usually aim to promote this object, is to stimulate future action in things deemed beneficial, by the offer of premiums. These means are excellent—provided that the subjects for such honorary rewards are judiciously chosen. The proper test for the propriety of any offer of a premium, is either the utility of the thing, in extensive practice, for which the offer is made—or, otherwise, the amount of instruction or aid afforded to agriculture, produced indirectly or incidentally in competing for the premium. If neither of these ends is obtained, then the premium was probably offered and awarded in vain.

Agricultural societies and their festivals were first commenced in the grazing and stock region of the Northern States. We of the more Southern and agricultural States, in following the general good example, have too closely imitated details, which if proper even in New England, (and which may well be doubted,) are certainly unsuitable here and still more unsuitable farther south. The very name of "Cattle Show and Fair," which has been so generally received for the chief exhibitions and festivals of our agricultural societies, indicates its northern origin; and also, that in the procedure of such shows, the great and true agricultural interest is made to act a subordinate part, to the interest in stock-keeping, and household manufactures. Thus, with mis-placed deference to, and humble imitation of, societies representing an agriculture very different from and far inferior to our own, we of the south have aimed chiefly at stock exhibitions, where stock-keeping was one of the least important parts of the farming business; and the necessarily inferior show of live-stock was eked out by numerous productions of household or other manufacture, which had even less connexion with the most valuable and important features of our agriculture. And while our societies were content with thus displaying the poverty or deficiencies of our more sunny region in those things in which only our northern exemplars possess any agricultural wealth, our great agricultural products and sources of profit, and the admirable improvements and practices of our best farmers, were passed over either with scant notice, or as if having no existence. Even in South Carolina, whose rice-culture alone is of more commercial value, and more admirable for its perfection, than all the agriculture proper of all New England, but where the live-stock products are, (necessarily, because of climate,) of very inferior grade and interest, even there, agricultural societies have aimed to hold "cattle-shows" upon the New England plan, rather than properly to promote the improvement of agriculture in general, or the particular branches most suitable for South Carolina.

This misdirection of effort, in the vain and futile imitation of the very faulty original example of the Northern agricultural societies, has been one cause of the inutility of the like societies which have had a brief existence in Virginia. Among these, there was one, the most conspicuous and seemingly important of all—which, with the advantage of a metropolitan location—within 25 miles of the most deservedly celebrated model farms, and farmers, of Dover, Shirley and Westover—lived and flourished some eight years or more—and which society obtained more support in members and funds, held more "cattle-shows," and awarded more premiums, than any other agricultural society which has existed in Virginia. Yet this society, during its unusual long existence, (for Virginia,) did not elicit, or receive, (so far as known to me,) so much as one written or even verbal communication of instructive agricultural practice, or in any other way add one particle to the then existing mass of agricultural knowledge. Next followed a "Virginia State Agricultural Society," which was established (if the publishing the first organization and constitution deserves that name,) as late as 1845, upon a grand scale of operations, including, of course, in design, "annual cattle shows and fairs." This society was not precisely still-born. It uttered, as a sign of life, but one loud cry, (in the publication of its first organization,) and its voice has never been heard since. A second "State Agricultural So-

ciety" was hurried into existence last February, for the purpose (and the only one yet apparent,) of burying its printed constitution under the corner-stone of the monument of Washington. Possibly, thousands of years hence, some convulsion of the earth, or the laborious researches of the then antiquarians, may up-turn the deep foundations of that structure, and expose its hidden mysteries—and some Champollion of that remote era may find and decypher the constitution of the "State Agricultural Society of Virginia," and thence deduce and maintain the great and important services which must have been rendered to agriculture by a society of such great scope and magnificent pretension. But until such time and occurrences shall give to it this character, the latest "State Agricultural Society of Virginia," like most of its predecessors, will probably present no claim to the reputation of having effected the least benefit to agriculture. This latest formed society also adopted (in its constitution—its as yet last utterance—) the "cattle-show" plan of operations. The result may easily be anticipated. I grieve to confess that such is the manner in which the working and efforts of agricultural societies, and especially those of highest pretensions, have been directed, or rather aimed, in my own country. Yet nowhere are agricultural societies more needed—nowhere are there better materials to compose them—nowhere more interesting or profitable subjects for their action;—and there, as everywhere else in agricultural regions, these societies, if directing effort in proper manner, may be of the greatest benefit to agricultural improvement.

Here, gentlemen, I will offer the only present addition to these previously written observations, and which is called for by present occurrences. My opinions and views, as just expressed in general terms, certainly include in condemnation a large part of the direction of the premiums of your societies. This I will not attempt to deny or evade. I do not fear that you will suspect me of having designed this particular application of remarks, which were written before my knowing anything of either your past or your intended procedure. And when so acquitting me of such design, I trust you will also pardon my frank utterance of what I have long believed to be truths. But it is due to these societies, to all this assemblage, and to myself—and also to truth—for me to add, that even if your plan is wrong in some of its parts, you have executed it in the best and most admirable manner. The show of animals which I have seen here with great pleasure, and much more surprise, in the number and excellence of the specimens, has far surpassed any anticipations that could have been formed for this tillage region. The extensive display of agricultural machines and implements, and all other matters deemed entirely right and judicious in the action of your societies, I pass over, as unnecessary to this apologetic comment. And if your festivals, and all the connected proceedings, had done nothing more than to bring together so many intelligent and zealous farmers—and many of them accompanied by their wives, daughters, or other female relatives—and to excite and to stimulate interest and zeal for agricultural improvement in the breasts of so many participators in this and previous festivals—by these means alone you will have produced great good to your agricultural practice, and still more increased the great and peculiar value of your agricultural and social position. From this digression, in reference to present circumstances, I now return to more general considerations.

Premiums offered prospectively, to invite subsequent action of competitors, can apply to but three classes of subjects or practices, viz: 1st, such as are known to be profitable—2d, such as are known to be unprofitable—and 3d, practices of unknown or doubtful expediency and profit. It is manifest that premiums (unless of very great and unusual value,) offered for the first class of subjects, must always be useless. As general propositions, every farmer knows well that it will be the more profitable course to enrich his fields, to drain and till them well, to use good implements, and to keep his working animals in good condition. Yet either the want of sufficient care, of means, or of industry, causes almost every farmer to be more or less deficient in some of these important requisites—and some farmers in all of them. But greatly as improvement is needed in these and similar matters, none could be produced by the direct stimulus of ordinary premiums. Profit is the farmer's great object; and if the probable prospect of adding 20 or 50 per cent. to his income by reforming his general practice and avoiding his previous errors, has no effect, it would be idle to expect such efforts for the purpose of obtaining a twenty-dollar premium.

The greater number of premiums heretofore offered by agricultural societies in general, strange as the assertion may appear, are for the second class of subjects,—(practices known to be unprofitable,—) and, generally, are as clearly hurtful as those of the preceding class are useless. Reference to most of the lists of premiums heretofore offered by societies, will show that a large proportion of them are for practices which will insure a loss to every competitor—unless the premium itself shall be deemed a reimbursement to its winner, only. Subjects of this class are such as the most productive acre (or other small space) of corn, wheat, rye, and of various other crops—and for the finest (which is usually understood as including the qualities of largest and fattest) ox, cow, hog, sheep, &c. To obtain such premiums, enormous products have been raised on many particular acres; and many animals (of good breed and form it is true,) have been pampered from their birth, and carried to astonishing degrees of size and of fatness. For such and approximate results, hundreds, possibly thousands of premiums have been awarded, by the numerous agricultural societies of the Northern States, and the few in the Southern. And yet, unless to gain another such premium, never has any of these particular practices been repeated by the successful competitors, or imitated by any other person—and for the sufficient reason, that both such cultivation and such manner of feeding are of more cost than profit. It may be doubted whether in Belgium or in China, the best cultivated and most populous countries of Europe and Asia, it can ever be the most profitable course to bestow so much labor and manure as to raise the production of land to its maximum. In the United States, where land is so plenty and cheap, and labor so high, the least reflection will show that such a course would be the extreme of folly. The manifest loss attending these wonderful premium products serves effectually to prevent the example being followed; and therefore this bad husbandry is confined to the few who make such efforts merely to obtain a premium. But universal and great loss would ensue, if such premiums could have the

effect of extending the practices, so induced and rewarded, to every cultivated acre, and to every fattened animal, throughout the country.

It is not denied that even these ill-directed premiums may bring to light some new and useful truths, and thus afford valuable instruction. Persons who were merely aiming to secure these premiums, may have learned, for example, how thick corn or other crops may be safely planted—or how heavily they may be manured with still increasing effect—what materials and preparation of food will lay on most fat, &c., &c. But even if any such information were so derived, the gain would be incidental, indirect, and unsought for. And for obtaining such information, the direct offer of premiums for suitable experiments, would have been much the cheaper and more effectual mode.

Practices of the third class named, (those of doubtful expediency,) if of sufficient importance, are the proper subjects for experiment. And for experiments on designated subjects, accurately conducted, and fully reported, a large portion of the funds of a society might be most advantageously bestowed in premiums. In this manner, the offer of twenty premiums, on different subjects, might induce the making of hundreds of experiments—every one of which would teach, or help to confirm, some truth of value.

Next to experiments for establishing new and useful truths, the most useful direction of offered premiums is to induce the writing of essays or treatises on stated subjects, in regard to which instructions for practice are needed. Such essays would be digests of all the important facts known on each particular subject, with the writer's deductions therefrom. But all such essays, whether treating of agriculture as an art or a science, and even if entirely scientific, should be capable of practical application, and of conveying useful instruction to practical farmers.

The premiums which have been so far referred to are such as are designed to stimulate or encourage the subsequent action of competitors. There are others, which though retrospective in their direct application, and therefore having no effect in producing the particular act so rewarded, are not therefore the less beneficial to the agricultural community. Among these are the very usual premiums for the best utensils and machines, already in use, for agricultural purposes. A premium so awarded worthily, is to the inventor or maker of value very far exceeding the amount bestowed, because it is the best recommendation and advertisement of his production to buyers. On the other hand, such correct designation of the best articles is of much benefit to farmers, in directing their purchases. The very importance of the bearing of such premiums, however, requires that much caution and judgment shall be used in their being awarded—or otherwise great wrong and loss may be inflicted on the very persons who ought to derive the benefits.

Another useful direction of retrospective premiums would be to such farmers, or others within the bounds of the society's operations, as had introduced the most useful process, implement, or any other thing deemed the greatest improvement in agriculture within the preceding year. This would induce the claims for every new improvement to be speedily made known—its merits to be discussed and appreciated—and the general use, if expedient, soon to follow. While the premium would go to the discoverer or introducer of the new improvement, and be a justly bestowed mark of approbation, the agricultural community would receive a hundred-fold greater benefit, in the early information so conveyed. I will offer an illustration of this operation especially applicable to this locality. It was a farmer of Talbot county, the late John Singleton, who, as far back as the year 1805, first began with success, and continued regularly thereafter, the use of fossil shells, or marl, as manure. Yet so slowly did the knowledge of his very important discovery and improvement, spread abroad, that the facts were not published until in 1818.* Before that time, other pioneers in this enterprise, in Virginia, had also discovered the value of this manure, each one in entire ignorance that he was not the first beginner. Even to that time, and indeed for long after, Mr. Singleton's example had not been much known or followed. The postponement of the use, or very limited use, of his discovery and example, for 15 or 20 years, compared to what would have been the effect of the general early use of the improvement, was a loss of productive value to the tide-water region of Maryland, of not less than the then fee-simple value of the whole territory. Now, if either of the societies which are here met together, had then existed, and had before offered a premium for every such useful improvement, how different might have been the early results! The premium would have been awarded, and most worthily—the grounds of the award made known by speedy publication—every reading farmer would have become interested in the facts—and more could have been done to spread the knowledge and practice of marling in two years, than was actually done in fifteen or twenty.

IV. *Agricultural Professorships.*

If agricultural professorships were established in our universities, or other scientific institutions, young men who were there acquiring a liberal education, might also easily obtain a competent knowledge of the general principles of agriculture. If this object would not be a sufficient inducement for the students designed for farmers to give an additional year to scientific education, it would be an advantageous exchange if the study of agriculture could be substituted for some other branches of science of the least practical application and utility. It is easy enough to ridicule the agricultural instruction that would be acquired from the lectures of a scientific professor—a mere man of books and of theory. It is freely admitted that the best possible course of scientific instruction, alone, could not make a farmer. Yet it would be the best preparation for the future acquisition of all the knowledge important to a practical farmer. It would be absurd to expect, in the lectures of a professor, directions for practical operations, or for the art of agriculture. But we might well expect from such lectures to learn the general and sound theoretical principles of agriculture, and of kindred sciences, (so far as connected with agriculture;) without some knowledge of which, no practical tiller of the soil can avoid committing many blunders, and suffering many losses. For example: a farmer is laboring in the dark, and always liable to error, in

* The first published report was in a letter from Mr. Singleton in answer to inquiries addressed to him by Chief Justice Tilghman. That letter of inquiry was dated in November 1817, and published some time in 1818, in the Memoirs of the Philadelphia Agricultural Society, having been communicated to that body by Judge Tilghman. See vol. iv. Phil. Agr. Memoirs.

his ordinary and important operations of preparing, preserving, and applying manures, unless guided by some knowledge of the chemical composition and changes of the materials used—of the composition and qualities of the soil to be enriched—and of the functions of plants designed to be nourished. Even but a slight degree of knowledge on these points would serve to guard against a serious amount of the waste and loss which occur on every farm—and the total amount of which makes a hundred-fold greater general loss to the commonwealth than would be the cost of agricultural professorships, and many other means for instruction here advocated.

V. *Experimental Farms.*

An experimental farm, under proper direction, would also serve well for increasing agricultural knowledge. But it would be a mistake, fatal to the proper object, if such an establishment were expected to exhibit a system of model farming, or even of average management, or to yield the smallest pecuniary profit on the investment. Such expectations would necessarily be disappointed; and their having been improperly entertained, would throw undeserved reproach and discredit on the whole plan. The proper working of an experimental farm is very different. Its design and main use should be to make trials of new or doubtful manures, implements, particular methods or processes in farming, and more general systems of tillage—so as fairly and fully to test their respective merits, by the most careful and accurate procedure, for the information and benefit of the whole agricultural community. Further—there should be practised, for exhibition and instruction, every ordinary process and labor of good husbandry, conducted in the most perfect manner, suitable to ordinary or existing circumstances. This would not be difficult to effect. And thus the pupils and laborers might learn practically and thoroughly, the proper and best modes, and also the manual skill required, for ploughing, draining, manuring in all its branches, sowing seeds, reaping, hay-making, building shocks or stacks, &c., which are executed badly and to great loss on the great majority of farms, for want of instruction or example. To carry on such a course of practical instruction, it would be necessary to include in the operations the regular tillage of the farm, as a foundation and bond of connexion for all the details; and also to provide regular and useful employment for the operatives, and to raise products for the feeding and partial support of the establishment. The labors of the farm should be executed by young men, who in that manner would receive and pay for their instruction. Other pupils would pay for their instruction in money. And still another and much more numerous class, the visitors for a few days only, or even a few hours, might by inspection gain information, which, though more slight, would be spread in many and various ways, and to remote localities.

In these different operations, an experimental farm would co-operate admirably with an agricultural professorship—the one serving for instruction in practical operations, and the other in the theory and general principles of agriculture. The farm, in addition to its more important uses, would be an out-of-doors laboratory and apparatus, for illustrating in practice the scientific lectures of the professor of agriculture.

VI. *Agricultural Pupils, or Apprentices.*

Some authorities have recommended the establishment, by government, of "model" or "pattern farms," on which by example might be taught the best system of husbandry. This would be indeed a most valuable aid. But the necessary means are unattainable and impossible—and, therefore, any such attempt would end in speedy disapponintment which would cover the scheme with ridicule and contempt. A good return of pecuniary profit on the investment, is an indispensable part of a good system of farming, or any claiming that character. It scarcely needs proof, that farming, conducted upon government account, no matter how favorable the other circumstances, could not possibly return any profit, or even be secure from annual loss. But the good end in view may be reached in another way. Instead of the vain attempt to establish a model farm for teaching a system of good practical farming, it would be far better to use for that purpose the now established farms of many private individuals, which are the best examples of good husbandry. The proprietors or managers of these truly model farms, if consenting, might become what may be deemed adjunct professors of agriculture, for the practical department. By their receiving as either pupils or apprentices a few young men who had previously passed through a course of theoretical instruction, these farmers would render most important service to agricultural improvement in general, as well as to the particular individuals receiving their instructions. On one of such farms, and with such facilities for instruction by example, a young man might learn more of good practical farming in a year, than from his own otherwise solitary and unaided efforts, on his own farm, if continued through a long life.

VII. *Agricultural Papers and Magazines.*

Notwithstanding all the existing obstacles and difficulties, American agriculture has made much greater progress in the last thirty years, than in all previous time. This greater progress is mainly due to the diffusion of agricultural papers and other periodical publications. In the actual absence of all other means, these publications, defective as they have been, almost alone have rendered good service in making known discoveries in the science, and spreading knowledge of improvements in the art of agriculture. But even this, the only existing aid, is much less effective and beneficial than it might be. The buyers and readers of these publications are comparatively few. Probably not one farmer in twenty takes one of these papers; and even of all those received south of Mason's and Dixon's line, perhaps one-half are more northern publications. Every farmer would greatly promote his own instruction and interest by reading such a paper; and still more, by giving his preference and support to publications of his own agricultural region. In this respect, we cannot too closely follow the example of the northern farmers. They sustain well their own agricultural papers, and (with the few exceptions directed by self-interest,) give none of their money to any others. The farmers of the slave-holding States, on the contrary, have heretofore offered but little encouragement to the agricultural papers established by their own countrymen, and yet have paid full as much to support northern publications, which are much less suitable for their wants, and their benefit. This remarkable and inexcusable mis-direction of southern

patronage is not attracted by any superior merit of the northern publications. At first, indeed, they were lower-priced; which advantage was the effect of the much larger demand, and the much larger editions printed and sold. But even this difference of price does not now exist. For there are southern agricultural papers at the now universally established low subscription price of one dollar, which are at least equal, in the quantity and quality of their reading matter, and greatly superior in particular application to southern husbandry, to any of the northern publications.

The most efficient cause which has operated to direct so much of southern patronage to the support of northern publications, is neither their greater merit, cheapness, nor any other ground of actual preference. It is to be found in the system of agencies, and especially of travelling agents for some of the northern publishers, traversing every part of our country—and who are enabled to do so almost free of expense, by living on hospitality—and personally and urgently soliciting subscriptions. Most of our people find it difficult to repel personal solicitations of this kind—and still more when urged by persons before received as stranger-guests, and welcomed to their hospitable boards;—and thus, under a kind of duress, they will yield to the bold begging for a northern print the aid which (either from carelessness or indolence,) they had not voluntarily offered to the better, but more modest and quiet claims, of any southern publication. Perhaps there is scarcely one of my present auditors who does not know, from personal experience, something of the operation of this state of things. It is full time to change this heretofore usual procedure. It is full time for every farmer of Maryland, and of the other Southern States, who has heretofore paid such extorted tribute to northern publications, to withhold it, and direct the amount to some one or more of such papers in his own agricultural region. In this region there are already some of the best of existing agricultural papers, (which it would be improper for me to designate,) and nothing is required but better general support, to render such papers more numerous, and of very far more beneficial operation.

Everywhere in the United States a decided preference for low-priced agricultural papers prevails—and it seems that a dollar a year is the highest price that can be obtained for any one of general circulation and popular use. It is true that for so low a price a large quantity of useful matter is supplied, and that practical agricultural instruction is thereby greatly advanced. It is well that the taste of the great majority of readers should be conformed to, in both the contents and the cheapness of these papers. But publications so limited in size, and in price, cannot supply all the published instruction needed for agriculture. It is much to be desired that there should also be established some monthly or quarterly journal, of greater bulk and higher grade and price, which would present articles more elaborately discussed, or of more scientific character, than are suitable for, or even admissable in, a publication of a single sheet, issued but twelve times a year. The British Quarterly Journal of Agriculture, and especially in that portion which contains the papers elicited by the premiums of the Highland Society of Scotland, offers an excellent plan for a publication of superior order. And if such a one could obtain support in this country, it would in no respect conflict with the usual and proper sphere of operation of the existing cheap publications, or lessen their support.

VIII. *Agricultural Books for Schools.*

Besides the better sustaining, and thereby improving the value of the existing agricultural papers, much good might be done by the State governments, which now pay for a school system, also inducing the printing of agricultural tracts, or books, suitable for the use of all elementary schools. Proper publications of this kind might be most advantageously substituted for the books of mere reading lessons now used; and if introduced in all the lower schools, the change would effect a great saving of price, as well as a very beneficial alteration of the reading matter. Such publications would not only supply agricultural instruction (for future use,) to the boys at school, but also to many of their fathers. By the printing of very large editions, the prices might be reduced to half the low rate charged for the ordinary religious tracts—which is believed by most persons to be the *ne plus ultra* of cheap printing, and that it could not be done except by aid of the great amount of money given by numerous benevolent and pious persons to sustain the excellent object. Yet every printer knows that, for equal amounts of sales assured, he can make enormous profits by publishing pamphlets at the prices of these tracts.

The county commissioners of the primary schools, in Virginia, are limited in the purchase of books for the pupils, to the expenditure of one-twentieth of the annual State appropriation for the schools. From such a limitation having been found necessary, it may be presumed that the whole amount authorised is so expended. This, for all the counties of the State, would make about $3500 a year, expended for books, for the State primary schools only. The books so purchased, as all others for all southern schools, are, of course, *northern publications*. This amount alone, if used to print agricultural (or any other) books for schools, in very large editions, would provide ten times the quantity of reading matter that is now obtained. If, in this manner, all the books for reading lessons used in all the schools of Maryland and Virginia, (and it might include much more of the south,) could be such as conveyed, in a pleasing manner, useful instruction on agriculture, or matters of domestic economy, there would not only be an annual saving of many thousands of dollars in prices, but also the planting of seeds which would in time produce a valuable harvest of agricultural knowledge and improvement.

These latter subjects, on this occasion, cannot be treated in detail, as they require—and they must be now dismissed, with this hasty and imperfect notice. If they are deemed worthy of more full consideration, I trust they may have it in the future reflections of all who may have taken interest in these remarks—and whose attention and time I will now no longer occupy. Whether my suggestions indicate the most suitable means for promoting instruction and improvement, or not, there are persons of more knowledge and better judgment than myself, who can devise good and effective means for that end. Let such means be sought by these and the other zealous and public-spirited agricultural societies of Maryland—and let their adoption be pressed upon the consideration of your legislature, and upon the people. And if any properly directed action can be produced—whether of your

government or of the societies—or whether on a large or a small scale of expenditure—you will then have effected a great, if not the greatest possible benefit to agricultural improvement and interests, and to the commonwealth of Maryland.

WORK FOR THE MONTH.

JANUARY.

A happy, happy, new year to all. May your days be crowned with health, happiness, and prosperity: may fruitful fields, and abundant crops be the result of your year's labors; your products bring good prices, and your every rational wish be gratified.

Now let us turn our thoughts to business. As this is the beginning of a new year, we should all determine in our minds, to so conduct our operations throughout it, as not to lose any time that can and ought to be devoted to our occupation, and so to strive, that our exertions shall tell in their results, as well in the volume of our products, as in the *improvement of our soil*.

There is a quaint saying, which carries its moral with it. It is this,—"the first blow is half the battle"—the meaning of which is, so far as our labors are concerned,—*it is important we should begin right*. In all business operations, and in none more than in that of the agriculturist, it is of the very last consequence, that the why and the wherefore of all that we may do should be duly considered in all their bearings, before we commence. Study out, then, the *system* you may intend to pursue, before you attempt its execution—be sure that the one you may fix upon, is the one best calculated to promote your interest. Having satisfied your mind upon that point, gather up your strength, go ahead, and permit nothing to interrupt or prevent you from completing it.

In marking out your year's work, look well to the force and the means you have to work with;—don't overcrop yourself; for so sure as you do, much will be left undone that ought to be done—much will be half done, that ought to be well and thoroughly done. Strain every nerve to manure every acre you may cultivate that requires nourishing; and upon this point make up your mind, that every plant cultivated by husbandmen requires to be fed—that an acre well manured, well ploughed, and well cultivated, will bring more than two which is not—that it is always best to confine our culture to what we can do justice by, both as regards manuring, preparation, and tending. More corn should not be put in, than can be generously manured, and cleanly cultivated; nutriment and cleanliness being essential elements in its product.

With these admonitions, we desire to direct your attention to the details of matters claiming our notice

On the Farm.

Winter ploughing.—There are many periods of the winter, when, from the mildness of the weather, ploughing may be done. All such periods should be availed of to break up any very stiff, intractable clays, that may be intended to be put in spring crops. By exposure to frosts, when broken up, such lands become greatly improved, and lose much of their tenacity of character, are more easily worked, less expensive to till, besides being rendered better adapted to the production of crops. But this melioration in texture, can only be expected, where the soil is neither too wet, nor too dry, when ploughed. If too wet, the furrows turn up like so many masses of mortar, requiring an entire season's working to disintegrate them: if too dry, the ground breaks up in indurated lumps, almost unsusceptible of reduction to any thing like proper tilth. The proper time for breaking up such lands in winter, is when it is only tolerably moist; when the quantity of water is just enough to impart a pleasant degree of cohesiveness to the soil, to enable the ploughman to turn his furrow slices without difficulty.

Lands ploughed at this season, should be lapped, at an angle of about 45 degrees, so as to expose the greatest surface of the upturned earth to the action of frost, and to form conduits between the furrows for the free and uninterrupted passage of the water; they should also be ploughed deep.

Surface drains.—Careful hands should be made go through the fields in winter grain, examine the surface-drains, and remove all obstructions to the pasage of the water: this duty should be often repeated, so as to prevent any accumulations of water upon the young plants, the which, always exert the most unfriendly influence, being frequently the cause of what is termed winter-killing; ground *surcharged with water*, being more liable to be operated upon by the contracting and expansive powers of cold and heat, than when such is not the case.

Working animals.—These of every kind should be treated with care and attention. Warm stables, properly ventilated; good fare, regularly dispensed to them; well littered stables, currying and rubbing down night and morning, and water three times a day, are great promoters of health,—and at no season of the year is such treatment and care more needed than at this, when the poor animals have to perform their daily labors amidst every degree of inclement weather.

A mixture of equal portions of salt, ashes, and lime, should be thrice a week given—2 oz. each time, to each beast.

Fencing, if not already gotten out, should be forthwith felled and hauled to the barn, to be worked up in bad weather, into posts and rails, by the hands.

Fire-wood.—If a supply for the year has not already been secured, push forward, and do so, in order that it may be hauled into the yard before the roads become so cut up, as to operate too severely on the teams.

Gates.—We repeat our advice of last month: have every pair of bars on your farm substituted by a good gate: the latter looks best, is best, saves time, and is the cheapest.

Milch cows should have warm stabling, plenty of litter, be generously slopt, and receive at least 21 lbs. of *good* hay or fodder per day, be watered before each meal, and receive the salt mixture thrice a week.

In-calf Cows and Heifers should receive full allowances of good hay, be watered and otherwise treated like milch cows, with the exception of the slops, which should not be given to them until a few days before their calving.

Breeding mares.—Treat these as we advised last month.

Young colts and cattle.—All young animals should be so fed as to be kept in good condition. To stint them in their food, is to stunt them in their growth. Good hay and grain are both necessary

Sheep.—Attend to these, as we advised last month.

Grain for feeding, goes farthest when chopt, or ground into meal.

Selling corn.—Shell all your corn before you sell it, and *crush the cobs for cattle feed*; when crushed, cooked, and mixed with cut hay or straw, 4 bushels are worth as much as 2 bushels of grain, and make most excellent messes for milch cows, or working oxen.

Corn and Cob Crusher.—If you have not got one already, buy one; it will save its price in half a season.

Corn Sheller.—Every farmer should have one, the *size* to be regulated by that of his crop.

Breeding sows should be provided with warm, dry, well bedded, sleeping apartments. Each inpig sow separately accommodated in this respect.

Store hogs.—Let their food be sufficiently generous to keep them in a growing condition: a hog to be profitable, should never be so fed as to be stopped in his growth.

The family Sleigh should always be kept in first rate order, for the accommodation of the ladies.

Wagons, carts, tools and implements of husbandry, should always be in good order, and when not in use, kept under cover.

Gearing should be cleaned and greased once a month.

Marl, if you have any, and fields that need it, haul it out to be broken down by the frosts of winter.

Poultry.—If you desire your hens to lay, give them flesh of some kind twice or thrice a week, chopt up with their other food—fresh fish boiled and cut fine, will answer as well. Fowls should at all times be supplied with lime or old mortar, broken fine, sand, and ashes: their hen house should be kept clean, their nests clean, and periodically supplied with fresh hay or straw.

Poultry dung, if saved properly, will be found nearly as good, if not quite as good, as guano. The evacuations should be gathered weekly, put away in a barrel, and sprinkled over with pulverized charcoal or plaster: if thus saved, and kept out of the weather, 4 or 500 pounds of it will manure an acre of land. Save it then, say we.

Materials for composts.—Embrace every opportunity to collect these. Recollect that such materials, by decay, form mould, and that *mould* is the soul and life-blood of a fertile soil—that though it may appear dead, it will live again through its powers of reproduction.

Memorandum, and account books.—In the beginning of the year, every agriculturist, if he has not done so already, should provide himself with a *memorandum*, and an *account book*.

In the former he should set down every operation, every transaction, connected with the management of his farm. His mode of manuring his several fields, the quantities per acre, and kinds of manure used, the time of ploughing, and depth ploughed, the time occupied in ploughing, harrowing, and rolling, the crop put in, the quantity of seed per acre, and mode of preparation and sowing, the time when seeded, the period when it came up; if worked, the number of times, when, and how worked, the force and kind of force used. Notes should be made of its progress from the period of germination, to maturity—of the weather and its effects upon his several crops: the commencement, and termination, of the harvesting of his several crops should be recorded, the force engaged therein, as also the effects of different manures upon the manured crops; the time when his several kinds of stock are served should be recorded.

The number of acres in each field should be ascertained and recorded, in order that the acreable product of his land may be reduced to certainty; this would act as an index of its fertility, and indicate the necessity and quantity of manure required.

In his *account* book, he should open regular accounts for personal and household expenses, for hirelings, if he employ any, for manures, if he buy any. Each field should be charged with the manure used on it, the cost of preparation, seed, and seeding, the cost of harvesting, the interest on the purchase and improved value, with cost of the labor bestowed on its culture and the preparation of its product for market, and cost of marketing. These fields should be credited with the several values of their respective products, and a balance struck. A debit and credit account should be kept against his poultry, swine, and dairy stock, as by the footing up he could see whether the one or the other was a matter of gain or loss, and regulate his course in the future, accordingly.

In a word, his books should be a fair transcript of the agriculturist's year's labor, and if properly attended to an hour each evening after the labors of the day were over, would be found a source of pleasure, and prove of infinite service in after years, in regulating the work on his estate.

WORK IN THE GARDEN.

There is not much to be done in the garden this month, but however little, it should be attended to, and it shall now be our province to point that little out.

Clayey beds.—If there be any stiff clayey beds in your garden, you should seize the occasion of any warm spells through the winter, when the ground may not be frozen, to have them dug up—when dug, they should be left in the *rough*, to be acted upon by the frost. Before having them spaded, spread on a good dressing of stable, or other strong putrescent manure. When dug, give the bed a top-dressing of lime, or ashes. By the action of the frost the cohesive properties of the clay will be measurably broken down; and by the united action of the frost and mineral, the soil will be sweetened and be rendered mellow, while the ammonia contained in the snows and rains of winter, will contribute essentially to increase its fertility: the frost will also kill many insects.

Independently of these benefits, your beds will be ready for early culture in the spring, and you will have gained that much time, a thing of moment at a period when much has to be done in a short time.

Hot-beds.—If your garden is not provided with hot-beds in which to grow plants for early transplantation, it is time to begin to get them ready, as such appliances are indispensable to the successful growth of early vegetables, to grow which should be an object with every provident owner of a farm.

If the procurement of *Frames* with glass lights should be considered objectionable, on the score of expense, the glass can be very advantageously substituted, by cotton cloth, which will be found to be a very efficient conductor of light and heat.

For most families, a hot-bed frame 10 or 12 feet

long, the width of the border, (which should face the south) will be found of sufficient dimensions to grow all the early plants needed, and such a frame can be made by any person that can nail planks together; but should glass lights be needed, the expense will not be heavy. The back of the frame should be twice the height of the front—the front about 5 feet high—a few inches space should be left behind the back, for the insertion of horse dung, to raise the heat—a top or cover must be made to stretch the cotton cloth cover, to be attached by hinges, for the convenience of being raised up and lowered down, to give air to the plants and regulate the heat. The cotton, when tacked on must be oiled. The best boards to make the frames out of, is, yellow pine about 1½ inches in thickness. We prefer the yellow to the white, because they are the most durable; and, therefore cheapest in the end, though any boards from 1½ to 2 inches in thickness will answer.

Mode of making the hot-bed. A hot-bed can either be formed on the surface, or by sinking the frame a few inches, the former we think the most eligible plan.

The dung should be horse-dung, which should be turned over, shaken, and well mixed with a dung fork as being put in on the bed: every now and again beat it down with the back of your fork: continue this process until the dung is about 4 feet in depth in the frame; when the dung must be left to settle down 6 or 7 inches, which it will do in 8 or 10 days: when the dung is in, put down the cover to raise the heat When the heat is sufficiently raised, put 4 or 5 inches of dry earth or mould on top of the dung, level and rake it and your hot-bed will be ready for sowing the seeds of any kind of vegetables you may desire to grow.

The space behind the frame must be filled with horse dung.

Time of sowing seed.—Most plants are ready to set out in from 6 to 8 weeks from the time the seed may be sown. Keeping this fact in consideration, those who have hot-beds can very readily regulate the time of sowing their seed; making the time when, in their *locality*, plants may be safely set out, govern as to time of sowing. As an average of time, it would be safer to allow 6 weeks for the growth of the plants.

Management of the hot bed.—On every good day, in mild weather, the sash should be raised a few hours, in mid-day, a few inches high to admit air and graduate heat. In bad, cold weather, the bed should be covered with matting.

FLORAL DEPARTMENT.

Prepared by John Feast, Florist, 279 Lexington st. for the American Farmer.

The *Greenhouse* will begin to assume a fine display of bloom. *Camellias* will be in flower this month and the next, in their perfection, and but little care is required to keep the plants in good order. Water them as seldom as possible; but give enough at the time to thoroughly moisten the roots through the entire pot; this is much better than merely giving a little at a time, when perhaps the roots at the bottom of the pot or tube will receive no moisture. This is one cause that Camellias get into a sickly state; and another cause is to be found in their receiving too much wet, rendering them liable to cast their buds. Give them frequent syringings with clear water, once or twice a week, if the weather is fine, and steam the house at night by pouring water over the flue; this is congenial to the growth of the plants, besides tending to destroy the red spider. If seed are wanted, fertilize the seed-bearing varieties with the finer kinds, and wash and clean the leaves, which will give them a healthy appearance; have the stocks ready for grafting next month.

Azaleas will need more water as they show their buds more fully. Keep them clean from decayed foliage.

Pelargoniums that are growing too late, should be topped so as to induce them to throw outside shoots. They look best in a dwarf state. Keep them in a cool part of the house and near the glass, which makes them grow strong.

Ericas will need attention. Re-pot all such as require it; put in cuttings, if you wish to keep up a stock; besides, topping the plants make them grow bushy and stroug.

Fuchias.—Re-pot these, and encourage their growth for an early bloom; put in cuttings of the most desired blooming varieties.

Tender Bulbs, as *Ixias, Sparaxis, Oxalises, Babianas Gladiolus*, should have their proper sized pots for flowering; give plenty of drainage and place them near the glass; give plenty of air, and thus secure a fine bloom, if they have not suffered for water

Cactuses will require a little more water; graft such varieties as are wanted to keep up the collection.

Achemenes, if wanted early, a few roots might be potted, and others brought forward in succession.

Cyclamens will begin to bloom, and such as are in small pots should be re-potted in those suitable for flowering in.

Chinese Primroses will be in flower; give plenty of water, and pot the young plants.

Hyacinths which were planted in the fall, in pots, may be forwarded, as they will soon bloom; and those in glasses change the water twice a week.

In keeping a collection of plants, where there is only one house, great care should be taken, in the arrangement of the plants, as some require a higher temperature than others, as *Euphorbias, Gesnerias, Hibiscus, Torenias, Marandia, Stephanotus*, and others too numerous to mention, which are often lost entirely for want of a proper knowledge of the warmth required to keep the plants alive, and are often put in the coldest part of the house with the hardiest plants. This knowledge is easily obtained, if not practically, by perusing most any botanical work, as Loudon's Encyclopedia on Plants, besides many others, which give every information necessary. Plants in cold frames will require to be lined round the outside to exclude the frost, with leaves, tan bark, or manure from the stable, and to have the sashes covered with mats or shutters, to protect the plants. If plants can be kept well in this way, they always do better in the spring than when kept in a greenhouse, as it is the most natural to the out-door culture. They will flower later in the season, but with much more vigor, than being forced early into bloom, by artificial heat.

Plants that have been planted out in the fall, will require to have a little protection around their roots, as rotten leaves, or something similar, two or three inches thick, so as to exclude the severity of the winter; cover lightly with a mat, or straw, such as may require it, until they become acclimated.—Many fine new Evergreens of recent introduction, need a little covering the first winter or two, as

Cuninghamias, Auricaria Imbricata, Crytomeria Japonica, Taxodiums, Photinias, Junipers, many fine sorts; Cupressus Lambortiana, Cedrus deodora and many more fine evergreens for lawns, besides many deciduous Shrubs and Trees, equally as beautiful, and which need only to be introduced and planted with care, to amply repay all the trouble bestowed, by their unique appearance and beautiful foliage. They are much admired in all grounds where they have been planted, affording a striking contrast with those introduced years gone by.

It has often been stated that the Camellia Japonica would not stand the winters of Maryland; but I can safely say it will, as I noticed a few days back about two hundred plants, from two to six feet high, as vigorous and healthy as any plants. They were covered with flower buds; they have been standing out three years,* which proves their hardiness; they are entirely exposed to the north, but shaded somewhat by some lofty trees all around and covered with leaves over their roots four inches thick, to prevent the frost from penetrating too much. They flower in the month of May, and may be classed as our finest evergreens for a Pleasure Ground or Cemetery, and need only to be introduced.

*The experiment was made by Dr. Thos. Edmondson, President of the Maryland Horticultural Society.

A SUGGESTION

For the consideration of Farmers and Planters remote from market, and General Matters of an Agricultural character.

By Patuxent Planter.

It is too inconvenient for the commission merchant who sells tobacco, rice, corn, wheat, &c., to attend to the sale of potatoes, &c. It is far beneath the dignity of our merchant princes to sell *eggs*, hominy beans and poultry. They make money by pounds, not by pennies—their poor servants, the landholders, are forced to creep upward by *crawling; they run* into fortune. Well, let that be as it is. I now propose that some person who can be relied upon, be an agent or commission merchant for the sale of *marketing*, with a fixed commission upon different articles, varying according to difficulty in the sale thereof and the trouble likely to be had in effecting a sale; that is, a larger commission on *small* and perishable articles than on larger and more enduring articles, less liable to decay—instance, fruit and fresh butter, in summer, ought to pay a higher commission than potatoes, bacon hams, &c. The object of this article is to show how materially benefitted the mass of farmers would be by the establishment of such a house in Baltimore. And secondly, how very lucrative such a business would be if properly conducted, and made, *as it should be*, the grand depository of all *country* marketing, the *merchant* being the *great head hucksterer* in the whole city, where all that was fresh, fine, *rare and prime*, from the *interior* of the country was to be had, and had at FIRST COST, like our tobacco, corn and wheat. To this depository would every lover of good eating, every epicurean repair, for his hams of *his* peculiarly favorite *stamp;* his *new* laid eggs; his butter; *fresh* vegetables; *really newly* gathered fruits, and *game* and *choice saddles of mutton* at *half* the price he pays for *made-up* mutton in the market, that his butler or his unsuspecting "*better-half*" thinks "looks nice," and is *a cent cheaper* than can be had at the stalls of Thomas or Turner, when they puff crack Southdowns or Oxfordshire, so fat that he who eats must want grease and nothing else.

The farming community living remote from market, and miles from railroads, canals, or other mediums which annihilate space, are losers to a great amount per annum for the want of a market for small matters. Thus they are unable to avail themselves of the practical application of the maxim by which to grow rich, which tells us to "take care of the pennies, for the pounds will take care of themselves." If such a commission house was established, how easy would it be for every planter who lived even fifteen miles from a steamboat landing or a railroad depot, every week to send what small articles could be scraped together, placed in a box or baskets, and receive the empty box or baskets which had been sent off the week before. A pass-book could always go along, and thus the account would be regularly kept and settled weekly, or monthly, or quarterly. Who can estimate the amount of money that would be realized per annum by the community if such a system be properly and strictly pursued? and it would be earned from what is *now* wasted, lost, never thought of, or prodigally used to the detriment often of health. All the extra eggs, or those not *positively* required for use in the family, vegetables that now rot because there are many more than can be consumed, such as tomatoes, peas, beans, potatoes, turnips, cabbage, radishes, asparagus, &c.; then the bacon hams, of superior quality, extra saussages, and a "few pounds of lard left over," a turkey, or ducks and chickens, &c., too few and too little in value to be sent twenty or thirty miles, in a wagon, to market; and all these little matters that are now used up in excess or sold to travelling hucksters at a price that is contemptible. Again—a farmer may have only a few calves or a single mutton sheep, or, now and then, a fine roaster-pig. For none of these, or all together, would a butcher come to his house and buy, and it would cost more than the whistle was worth to take either one, or *all* together to market a great distance off. In butter and eggs alone, thousands of dollars would be made and saved where not a cent is now. The Baltimore market would be improved beyond conception, and I have little doubt that numerous commission houses of this description, employing hundreds of clerks, would speedily be established after a little time from the commencement of the business. It could not be otherwise than lucrative to the "market merchant" and profitable beyond compare to the farmer, while it would aid the city of Baltimore immensely. It is not unreasonable to say that a trade amounting to $100,000 a year, would be at once opened, which never otherwise would be seen or felt, and which is (to at least three-fourths) now lost to the farmer. Look at the immense fields of cabbage everywhere in striking distance of Baltimore city, and you would ask, where can it all be consumed? It is consumed, and more is wanted, and the demand, I learn from the best authority, would be commensurate with the supply at present prices, which is some $200 or $300 gross amount per acre. The preparation of cabbage into sour krout, for shipment, is an immense business, and would increase if the necessary amount could be supplied. This could be done, if such a house, or houses, as I have suggested, were established. The farmer would know then that he would not be compelled to take anything, or next to nothing, for his cabbage, or be compelled to bring it back, for he

could store it, or he need not send it until his merchant had bargained for its sale, according to samples, and then the merchant would be a competent witness as to the contract. As it is now, a man living in a remote part of the State, taking 10,000 cabbages to Baltimore, would get nothing for them; yet if such a system was established as the one I recommend, he would get just as much for them as any *huckster* now gets. I illustrate my position again with a familiar example. A countryman will take a very fat turkey to market, just killed, and cleanly prepared for the table, and he will not get as much for it as a regular huckster could and would get for a poor one that he had had on hand perhaps a week. Nearly all the poultry and eggs and butter sold in the Baltimore market, are sold by hucksters and regular dealers, who have to pay expenses to get the several articles—who have to pay a man, find a conveyance and travel miles into the country to obtain these articles, and must, therefore, put a heavy per centum upon them, so as to *live, merely,* and a very heavy one and do a large business, too, to grow rich, as we find that they often do. Well, why should not this extra per centum be in the pockets of the producer, especially when the consumer would be furnished with a decidedly better, fresher, purer and more healthful article? It is to the interest of the Baltimorean as well as to the farming class, to look at this matter and set it a-going, if possible.

It is a subject of congratulation, Mr. Editor, that the cause of Agriculture is advancing rapidly, as from the glorious manifestations that our State and County Agricultural Exhibitions this autumn, fully displayed to the admiring gaze of increasing multitudes. In every department of these exhibitions, the *show* has been more varied, more numerous and more *instructive*. Oh! how gratifying was the grand display of machinery offered for public inspection by the intelligent and distinguished machinists of Baltimore, at the last State Fair. I do sincerely trust that the great cause may go on prospering and to prosper, until the agriculturists attain that position among their fellow men that the dignity of their calling entitle them to, and that nature and nature's God intended them to assume and to maintain. To accomplish which, it is to be hoped, every member of the State Agricultural Society of Maryland will enter upon the new year of 1851, with a firm resolve to let nothing prevent him from a vigorous effort.

RYE STRAW.

ELLENDALE, DEC. 1850.

To the Editor of the American Farmer.

If a "seeker for information," in your last No. is really serious in asking to be satisfied of the innocuous properties of rye straw, cut to feed with the chopt grain, I may add my experience to that, I think, of most practical men with whom it is in common use, in assuring him that his horses and cattle will receive no injury, but, on the contrary, great benefit from it. I always raise a crop for this purpose, and have a portion of it threshed by hand, and the straw tied up in bundles, for convenience in cutting, and am not aware, in twenty-five years' use of it, with horses and oxen, that it has been in a single instance, detrimental to them—nay, they frequently have free access to large ricks of it, as it comes from the threshing machines, and eat the bearded heads with impunity—so do my sheep and young cattle.

This mode of feeding rye is very well, but I prefer sheaf oats, cut in a box, or by machine, with which is mixed as much chopt rye, moistened with water, as will make it adhere, to prevent the animals, to which it is fed, from wasting it, as they will do, if left dry, in search of the shattered oats. With such food, their allowance of hay may be much diminished, and this expensive article of provender reduced more than one half. The screenings of wheat and oats, i. e. the light and imperfect grains that fall from the fan, ground together, and mixed with cut oats, or rye straw, make excellent and economical feed, as they are fit for nothing else, and in default of these, corn ground with the cob, and used with cut straw, is decidedly the best food for horses, mules and cattle, and omitting the straw, for every description of stock on the farm, including the bipeds of the poultry yard—Every out-door dependant on the farm, is fond of, and grows fat on it. The sucking pig leaves the sow to partake of it when it is poured into the trough, and the fowls contend lustily for their share of it. A bushel of corn in the ear, will make a bushel of meal, and, in my opinion, go nearly as far as a bushel of shelled corn. It is, moreover, a better food; the bran from the cob corrects the tendency to acidity of the corn, which frequently disposes stock to scour. I have a horse power mill for this purpose; and a simple contrivance driven by water, in my barn yard, which did not cost me $5, and which yields me two or three bushels of meal in the twenty-four hours, for it runs night and day, without other attendance than is required to fill the mortar with corn, and to take out the meal when ground. It is not an original invention with me, but rather an improvement on a primitive one, to which I will make additions, when I have a little leisure, that will greatly increase its power and usefulness, without much adding to its cost. Our excellent friend Glenn, has an account of it, which I sent him some time ago, when he told me he was venturing on hydraulics, and if he has not destroyed my letter, it may be worth your while to read it.

Yours, W. B. B.

OHIO.—*W. W. Maher*, Esq., late Geologist of Ohio, is appointed by the Board of Agriculture of that State, its Corresponding Secretary and State Agricultural Chemist. He is to reside at Columbus, but will from time to time, visit the several counties of the State, and lecture on the subject of agricultural improvement, for the purpose of securing efficiency in the county organizations.

The Board of Agriculture have resolved to hold its next Fair at Columbus, on the 17th, 18th and 19th Sept. next, "provided the citizens thereof, furnish the sum of *three* thousand dollars to the Board for the purpose of paying the expenses incident to the Fair." This, says the Statesman, "we feel assured the citizens of Columbus will promptly do. The Board voted the Fair here on this condition, believing that it would be best so to do, although larger offers were made from other cities. The citizens of Columbus only ask the privilege of showing what they can do, and then they will go into the work with the understanding that there is no such word as *fail*."

Persian Tobacco Seed.—We distributed to sundry planters some of this seed, left with us by a merchant of Baltimore. A beautiful sample of the Tobacco raised from it by Mr. Fenwick, of West River, Md., can be examined at our office.

AMERICAN FARMER.

BALTIMORE, JAN. 1, 1851.

TERMS OF THE AMERICAN FARMER.

$1 per annum, in advance; 6 copies for $5; 12 copies for $10; 30 copies for $20.

ADVERTISEMENTS inserted at $1 per square of 12 lines, for each insertion. In case of the continuance of an advertisement for six months or longer, a liberal deduction will be made. Address, SAMUEL SANDS, Publisher,
At the *State Agricultural Society Rooms*, No. 128 Baltimore st. over the "American Office," 5th door from North-st.

THE NEW YEAR.—We tender our cordial thanks to our numerous friends for the many kindnesses which we have enjoyed at their hands during the past year, in the prosecution of the duties of our profession—and we earnestly appeal to them to continue to exert their influence in the extension of the circulation of our journal. Our progress is still *onward*—and our desires are, whilst time and opportunity are afforded us, to do good to our fellow-men. We think we are in a position to accomplish that desirable object, and we call upon every patriot and philanthropist to give us his aid and comfort.

Many of the subscriptions to this journal commence with the year, which we hope will be speedily renewed—and we here call upon all indebted to us to remit the amount due as early as practicable. A memorandum will be found on the cover of the paper issued this month, of the indebtedness of each subscriber.

STATE AGRICULTURAL SOCIETY.—The quarterly meeting takes place at the Hall of the Society, on the first Wednesday in February. The officers of the Society are expected to be in attendance.

Mr. RUFFIN'S LECTURE, delivered before the Talbot Co. (Md.) Agricultural Societies, and published in this month's No. of the "*Farmer*," will command the most profound attention of the reader—The Lecturer has taken high grounds on various subjects, which cannot fail to create a sensation in the public mind, and lead to investigations as to the correctness of the several positions he has assumed.

TO CORRESPONDENTS.—We have received an excellent communication on the culture of the Apple and other fruits, from "A. W. S.," which we will publish in our next.

The paper from the pen of Mr. Ruffin, noticed in our last, is deferred, in order to make room for his lecture.

We shall take pleasure in replying to the several inquiries of "A Subscriber," of Louisa Co., Va., in our next. We intended to have answered them in this No.

The communication from *C. P. Holcomb*, Esq. of Delaware, on the subject of "Agricultural Societies," noticed in our last, was received too late for this No.—It will certainly appear in our next, and we bespeak for it in advance, the earnest consideration of the members of our State and other Societies—we much regret our inability to present it in this number—We have also a communication from the same gentleman, furnished at our request, on the subject of laying *Tile*, which will likewise appear in our next.

We are indebted to our friend Aug. Shriver, Esq. of Carroll Co., Md. for answers to enquiries in our paper, on the *Drill*, and the cultivation of *Rye* for stock, &c.—No one in the state is better qualified to give the desired information on these subjects than Mr. S., who is without doubt, one of the best practical farmers in Maryland. It will appear next month.

A paper from "C." of Sabine Hall, Va., has been received, and will be given in our next No.; it is on the subject of *guano*, and the deposites thereof at the Chincha Islands, from information derived from Com. Jones of the Navy, and other reliable sources. We would, if not particularly objected to, be gratified in having permission to affix the name of the writer to the suggestions made by him; they are important, and the recommendation of such influential and distinguished farmers as C. would have great weight with the agricultural community.

We shall be pleased to hear from the writer upon other subjects, as suggested in his private note—Our large and daily increasing number of readers in the old Dominion, renders it peculiarly desirable that we should obtain the aid of such able writers and excellent farmers as C. is well known to be. Communications from Wm. Baer, Esq. and "Blue Ridge" are received.

We are compelled to omit various other matters, until our next, some of which were promised for this month, among them abstracts of the proceedings of the County Societies.

The "Farmer" in Va.—Mr. Taliaferro, in renewing his subscription for the year, adds:

"I feel myself under lasting obligations to you, and many of your experienced and talented contributors, for the valuable information I have derived from the pages of the Farmer, and would not be without it for four times its cost. May the Farmer meet with that success from the public, which it so eminently merits.

W. W. TALIAFERRO.

Athens, Va., Dec. 13, 1850.

ASHES FOR SWEET POTATOES.—A Georgia correspondent asks us if "ashes applied to land through the winter, will do as well for sweet potatoes, as to apply it just before planting in the spring, or will they lose their virtue."

The virtues of ashes will manifest themselves from 14 to 20 years, and therefore, there could be no loss from a winter application.

LANCASTER CO., PA.—We are gratified to find that the attempt to establish an Agricultural Society in this rich and populous county, has been successful. At the first meeting under the constitution, Col. D. W. Patterson delivered an excellent address, characterized by sound judgment and good taste; which we would be glad to transfer to our pages, could we spare the space requisite.

Bone Mills.—Those wishing to obtain a good bone mill, are directed to the advertisement of Mr. Poe—We have reason to believe, that this is the best mill for the purpose now used.

Persons wanting bone dust, which during the Fall was very scarce, can now be supplied.

STATE AGRICULTURAL SOCIETY'S SHOW GROUNDS.—At the Annual Meeting of the State Agricultural Society, resolutions were adopted, calling upon the citizens of Baltimore to aid the Society in obtaining a suitable permanent location for the holding of the Annual Exhibitions, which it is now evident are destined to be of incalculable benefit to this city, if they are continued to be held here.

The President of the Society was authorised to appoint a Committee of our business men, into whose charge the matter was to be entrusted. In accordance therewith, the following named gentlemen were selected, viz: James Ellmore, John W. Randolph, Frederick L. Schæffer, William Thompson, James O. McCormick, Sterling Thomas, Geo. A. Lovering, John C. Brune, William Bose, Joshua Vansant, John Q. Hewlett, Henry Mankin, James H. Luckett, George W. Dobbin, Chas. M. Keyser, John Glenn, Alexander Murdoch, Hamilton Easter, Wm. B. Norris, John W. Garrett, Samuel Owings Hoffman, Edward B. Moon, Charles Goddard, John O. Wharton, A. S. Abell, Wilson M. Carey, Thos. Hambleton, James Carroll, Jr., John Feast, John S. Donnell.

A meeting of the Committee was held at the Society's Rooms, on Tuesday evening, the 10th ult., when, on motion, *Alex. Murdoch*, Esq., was called to the Chair, and *Jas. H. Luckett* appointed Secretary. The Chairman stated to the Committee the object for which they were convened, and embraced the occasion to impress upon them the importance and necessity of the business men and property holders securing to the State Society such facilities as would induce the permanent location of the great Exhibitions in our vicinity. After a free interchange of sentiments upon the subject, in which all present admitted the obligation resting upon the city to furnish the necessary aid required by the Society, the facility of obtaining that aid to a reasonable extent, was with equal unanimity also admitted.

Geo. W. Dobbin, Esq., thereupon submitted a preamble and resolutions, proposing to raise the sum of 10,000 dollars, for the purchase of a lot of ground, and the erection of the necessary enclosures and buildings thereon, suitable for the purposes of the Society at its annual exhibitions—which were unanimously adopted.

These resolutions were discussed at some length; some of the speakers deeming the amount called for not sufficient for the object, and that a much larger sum could be raised for the purpose, if required, the business men of the city having become so fully convinced, since the last Exhibition, of the great value and importance which these annual festivals are calculated to impart to the prosperity of our city, bringing to us as they do so large a mass of the population of the neighboring States. Baltimore, it is admitted, is the most admirable point in the whole Union for exhibitions of the kind, on a large scale—and no doubt can be entertained, if the means are placed at the disposal of the Society, to offer sufficient inducements, in a very short period, the gatherings at our Annual Shows, from the South, the middle and Western States, will be unsurpassed by those held in any other section of the Union. It rests with the citizens of Baltimore to secure the immense advantages which are at their command, by a display of a little of that liberality for which they are so eminently distinguished. The object is worthy of their most serious consideration, and we rejoiced to find, as we did at this meeting, that the importance of the subject was fully appreciated by the intelligent and practical business men who were in attendance—and others who were unavoidably absent from the meeting, have since assured us of their hearty co-operation in its objects.

The Chairman was authorised to appoint such committees in the several wards as might be deemed necessary to effectuate the object in view, and to call an adjourned meeting of the Committee on the third Wednesday of January, and at the same time, to invite the attendance of the Ward Committees which he may appoint.

HORTICULTURAL SOCIETY OF MARYLAND.—A number of our Florists, Gardeners, and Amateurs, have recently resuscitated the old Maryland Horticultural Society—and at a meeting held in November, the election for officers resulted as follows:

President—Dr. Thos. Edmondson.

Vice-Presidents—Joseph King, Jr., Henry Mankin, Johns Hopkins, Wm. C. Wilson.

Treasurer—Edward Kurtz.

Corresponding Secretary—Dr. Gideon B. Smith.

Recording Secretary—Chas. B. Barry.

Counsellors—Saml. Feast, Jr., John Feast, John J. Frisby, John Toumey, O. A. Gill, James Galloway, Geo. Waesche, E. W. Colburn, Henry Snyder, E. F. Jenkins, James Watt, John Dukehart, L. J. Williamson, Jas. McNeal, Jr., Robert Halliday, Chas. U. Stobie, Wm. Saunders, Zenas Barnum, Wm. Gilmore, Edward Roberts, O. Kemp, James Pentland, Geo. Duncan, Jr., Samuel Sands.

At a subsequent meeting, it was resolved to hold monthly exhibitions of Flowers, Plants, Vegetables, Fruits, &c. commencing in Feb., to which the members and their families are to be admitted—and in June next the first grand public Exhibition is to take place. The spirit which has been displayed in the renewal of this Society, gives the assurance of its success. A large number of members have already signed the constitution, and we think that we can promise an exhibition in June, which will do credit to our city and State.

We have received a copy of the address delivered before "The Phila. Society for promoting Agriculture," at the late exhibition held at the Rising Sun village, by *Sidney G. Fisher*, Esq., of Philadelphia. We have read this address with much interest, and regret our inability to publish it in our pages. We had marked off sundry portions of it for insertion, but find our pages are over crowded already.

KENTISH & CO.'S PREPARED GUANO.—We have received a copy of a pamphlet from Kentish & Co., New York, in which a number of certificates of farmers and gardeners of New York and other States, are published, showing the beneficial effects of the Prepared Guano. Three barrels are recommended for an acre of wheat, corn, cotton, garden vegetables, &c., and 2 bbls. for rye, oats, or buckwheat. The advertisement on another page gives the price of the article.

THE ALBANY CULTIVATOR.—A new volume of this ably conducted journal commences with this month. The HORTICULTURIST, published by the Editor of the Cultivator, also commences a new volume in Jan. The publisher of the *American Farmer* is the agent, and will receive and forward subscriptions for them.

PRESIDENT'S MESSAGE.—The message of President Fillmore at the opening of the present session of Congress, contains the following passage:

"Peruvian guano has become so desirable an article to the agricultural interest of the U. States, that it is the duty of the Government to employ all the means properly in its power for the purpose of causing that article to be imported into the country at a reasonable price. Nothing will be omitted on my part towards accomplishing this desirable end. I am persuaded that in removing any restraints on this traffic, the Peruvian government will promote its own best interests, while it will afford a proof of a friendly disposition towards this country, which will be duly appreciated."

We have no doubt the government is determined to carry out the wishes of the farmers upon this subject—still it will be well for those interested to bear in mind, that all public officers require to be reminded of their duty—and we hope the farmers and planters, particularly of the old states, most interested in this matter, will continue to urge upon their representatives at Washington to seize upon every occasion to keep the subject alive.

The following recommendation, will, we believe, be received with a hearty concurrence by the agriculturists of the Union:

"More than three-fourths of our population are engaged in the cultivation of the soil. The commercial, manufacturing and navigating interests, are all, to a great extent, dependent on the agricultural. It is, therefore, the most important interest of the nation, and has a just claim to the fostering care and protection of the Government, so far as they can be extended consistently with the provisions of the Constitution. As this cannot be done by the ordinary modes of legislation, I respectfully recommend the establishment of an Agricultural Bureau, to be charged with the duty of giving to this leading branch of American industry the encouragement which it so well deserves. In view of the immense mineral resources of our country, provision should also be made for the employment of a competent mineralogist and chemist, who should be required, under the direction of the head of the bureau, to collect specimens of the various minerals of our country, and to ascertain by careful analyses, their respective elements and properties, and their adaptation to useful purposes. He should also be required to examine and report upon the qualities of different soils, and the manures best calculated to improve their productiveness. By publishing the results of such experiments, with suitable explanations, and by the collection and distribution of rare seeds and plants, with instructions as to the best system of cultivation, much may be done to promote this great national interest."

We have had forwarded to us by the Agricultural Society of Medley's District, Montgomery Co., Md., the address delivered before that body at its last annual meeting, by Dr. *William Brewer*, and regret that the arrangements of our journal deny us the pleasure of inserting it. The address, as might have been expected, is excellent in all its parts, as is everything deriving its paternity from that sterling and intelligent old friend of agriculture, Dr. Brewer. Its advice is sound, enlightened, and patriotic, whilst its teachings show, that its author is at home both in theory and practice—in head and heart—in all that belongs to the business and interests of agriculture.

EASTERN SHORE LANDS.—The improvement now being made on the Eastern Shore of our State, has had the happy effect of increasing the value of lands there to a very considerable extent. Every dollar expended in draining, marling and liming, not only increases the fertility of the soil, but also the health of the neighborhood, so that that great obstacle to the settlement of many portions of this beautiful peninsula, its supposed unhealthiness, is fast dying away, and farmers from other States are rapidly settling therein—and in a few years the price of lands will probably range as high as they have ever been in the upper sections of the State. If there was the same enterprise which characterises the spirit that is evinced by the farmers of Delaware and New Jersey, in encouraging numerous small steamboats to take their surplus productions to market, it would be found that there could be a sufficiency raised, in addition to what is now wasted, to pay all the labor-expenses of the farm, without recourse to the money crops thereof. The expense of transportation to the great and most rapidly growing markets, which Baltimore and the District cities offer, can be made to be less by such conveyances as those to which we have alluded, and by the adoption of the plan suggested by our valued correspondent, "*Patuxent Planter*," than can be enjoyed by the farmers on our common roads who reside 10 miles distant. Our farmers can see by the census returns, the enormous increase in our city population—that increase is to be in a greater proportion, in the next 10 years, from causes now operating to our advantage as a commercial and manufacturing city. This great mass of human beings is to be fed, and if the farmers of our own State will not supply the demand, those more distant will—but that they are competent and willing to do it, we have evidences on every hand to assure us.

We have lately seen the notice of sales of land in Caroline county, at prices which a few years ago, would hardly have been credited—and a correspondent in a late number of the Cambridge Chronicle notices sales of land, which proves that the spirit which is abroad in Dorset, has already had a happy effect on the price of real estate in that county—we copy the paragraph to which reference is made. The lands sold by Mr. Crawford are situated between Church Creek and Tobacco Stick:

"Mr. Crawford, the trustee, sold at public sale last Saturday, a tract of unimproved land, in lots, which formerly belonged to Washington B. Jones, deceased; the lowest price paid was over $51, and the highest price was over $59 per acre. We believe these lands lay near to or adjoining the lands of Thomas C. Jones and James A. Stewart, Esqs. Within a very brief period we have known unimproved lands in the immediate neighborhood of Church Creek, adjoining the residences of John R. Keene, John Dorsey and Thomas Esgate, Esqs., to sell, one tract for $45 and the other for $50 per acre."

"*Affleck's Southern Rural Almanac, and Plantation and Garden Calendar for* 1851,"—by Thos. Affleck, of Washington, Miss.—Thos. L. White, New Orleans, publisher.—We have received a copy of the Almanac for 1851. It contains a great variety of useful and well arranged matter, and is intended particularly for the States of the South-West. So well pleased are we with it, that we are strongly tempted to get up, next year, a similar work for the Middle and Southern States.

THE CONTRAST.

In our last month's number, under the above caption, we gave an extract from the "*Transactions of the New York State Agricultural Society*," to show the generous response made by the people of *Keeseville*, a small village, to a call for aid from the Agricultural Society of the county in which it is located. In the same article we stated the unfortunate result of a similar appeal made by the *Maryland State Agricultural Society* to the people of the city of Baltimore, and could but express our surprise at that result. In making such appeal, the State Society had a right to expect that the commercial part of our community would have responded to it in a spirit of enlightened liberality, because they knew that the immense concourse of visiters, which the *Fair* would attract, would expend at least three hundred thousand dollars while here. But just and well grounded as were the anticipations of the Society, they were indulged in only to be disappointed; for with a few exceptions —highly honorable exceptions—the contributions from this class of our citizens did not exceed the ordinary subscription of membership, while many refused that poor pittance. This dereliction of an obvious duty, is the more inexplicable, as our merchants, as a class, are intelligent, and could but know that it was their *interest* to foster and sustain an institution, which annually brought its tens of thousands of customers to their doors. What could have been the motive that induced them to withhold their encouragement, it is difficult for us to divine. Their shrewdness preclude us from ascribing to them want of sagacity. Relieving them, however, of this horn of the dilemma, would only serve to throw them on another, and subject them to the imputation of being influenced by a degree of selfishness so foreign from the character of Baltimoreans, that we shall not perform so disgracious a task, as would be the ascription of that feeling to them. And we are, therefore, more willing to believe, that they labored under some temporary delusion, which, for the time, suspended that astuteness of judgment for which they are distinguished, and to hope, that, in the future, they will emulate the noble example of the people of glorious *little* KEESEVILLE, and her equally noble-minded sister villages of New York, and still redeem the name of our city from the unenviable fame of being wanting in public spirit—a fame which they have so unwittingly fixed upon her.

Good deeds, though they may be long delayed, come with a gracious mein, and are received in a kindly spirit. Especially is such the case, when they are the offspring of reflection, and demonstrate that the mind only wanted time to act upon the heart, to bring out the generous impulses of its nature, incite it to fulfil the obligations of its duty, and obey the promptings of an enlarged patriotism.

We have received from Col. Abert, of the Top. Eng. Corps, a copy of a letter to the Secretary of State on inter-marine communications, by Col. Geo. W. Hughes, of the Top. Eng. Corps, and a Report and Map, showing the operations of the Army in Texas and Mexico, also by Col. Hughes.

SHINNEY PEAS.—We ask the favor of those who obtained from us some of the Shinney Pea (so kindly furnished by Mr. Chisolm, of S. C.) to give us the result of their experience with it. Mr. Ruffin, we believe, received some direct from S. Carolina—will he favor us with the result?

CECIL COUNTY.—The following paragraph from the Cecil, (Md.) Whig, will give some idea to our friends out of the State, of the spirit of improvement which is abroad in Maryland.

Improvement of Cecil County.—Perhaps no county in the State is improving more rapidly than Cecil, in proportion to its population and territory.—The progressive spirit has been infused into our farmers, and our lands are being made rapidly productive. We are informed by an intelligent citizen of Sassafras Neck, that at one landing in that district alone (Fredericktown) one hundred thousand bushels of lime are now annually delivered, when ten years ago five thousand were not landed there. One farmer, and his farm is not very large, put on last year seventeen thousand bushels of lime, five thousand five hundred bushels of ashes, seven tons of guano, and one hundred and fifty barrels of bone dust.

Credit.—The paragraph on Agricultural Schools, inserted in our last, was credited erroneously to the *Southern Cultivator*, from which we copied. It was originally found in friend SKINNER's journal. The Cultivator will probably lead others into an error of the same kind, by copying into its last No. without credit, a portion of the able paper on Draining, by Mr. Ruffin, which recently appeared in the *American Farmer*.

JENNY LIND.—Our goodly city was in a great state of excitement during a week of the past month, occasioned by the presence of the "*Swedish Nightingale*," as she is termed—In the distribution of tickets to the press, the "*American Farmer*" was remembered, and consequently we had the pleasure of seeing and hearing this extraordinary songstress—We of course were delighted, and high as were the prices paid for the privilege of her concerts, it is rarely found that the outlay has been regretted—We have neither space nor ability for a critique on her performances, and can therefore only say, we were gratified in having had the opportunity we enjoyed of hearing her.

Jenny expressed herself as having been more pleased with her visit to our city, and with her accommodations at our neighbor Barnum's City Hotel, than at any other place since her arrival in this country—A large number of the beauty and fashion of our state were in attendance at each concert; many having visited our city from the extremities of the state for the purpose.

The boquets of Flowers which were showered upon the songstress, on the stage, seemed to give her more pleasure than all the other demonstrations which were exhibited towards her. Many presents were sent to her at her apartments; among them a splendid boquet by Mr. John Feast, florist, of this city, the acceptance of which was acknowledged by Miss Jenny in the following note, with a copy of which we have been furnished:

BALTIMORE, Dec. 9th, 1850.

DEAR SIR:—Allow me to thank you most sincerely for the splendid boquet of flowers which I found on my table, as a kind welcome to this city. It gives me much pleasure to say, that I have seldom seen a more beautiful arrangement or better specimens of white Camellias anywhere.

I am, dear sir, yours truly obliged,

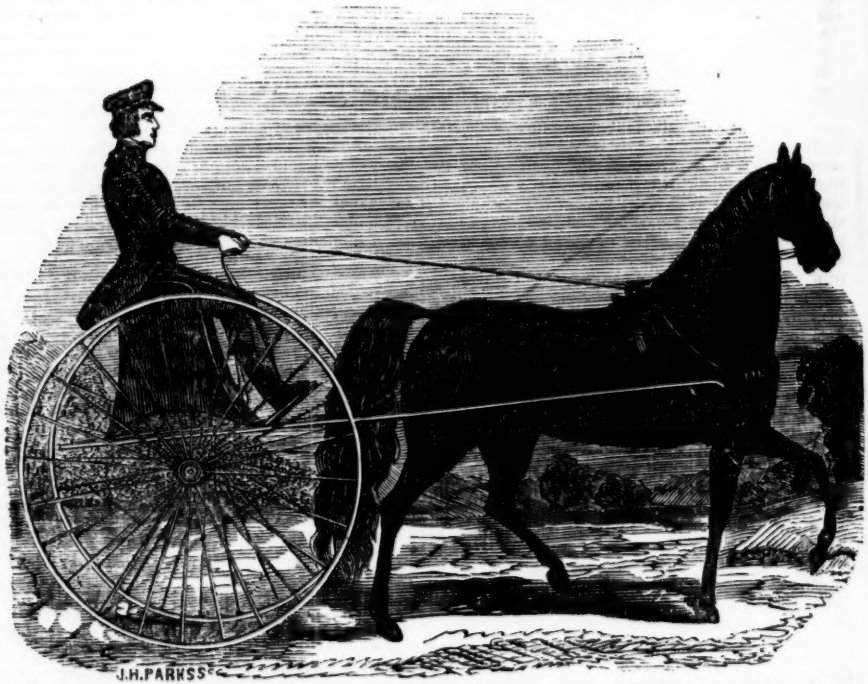
JENNY LIND.

To JOHN FEAST, Florist, 279 Lexington street.

CATTLE, SHEEP, POULTRY AND SWINE.—Those wishing to improve their stock, are referred to Mr. Clement's advertisement.

THE MORGAN BLACK HAWK,

Owned by Chas. Carroll, Esq., of Daughoregan Manor, Howard District, Md., to which was awarded the first premium of the Md. State Agricultural Society, at its late Exhibition.



Black Hawk was bred by the Messrs. Hills, of Bridgeport, Vermont, and was got by their celebrated horse, Hill's Black Hawk, and was purchased by Col. Carroll at a very high figure. He was put to service last season to a limited number of mares, and the amount received was nearly equal to his first cost.

The Hill Black Hawk was sired by the Sherman Morgan Horse, owned by Mr. Bellows, of Vermont; Sherman Morgan by old Justin Morgan; old Justin Morgan by True Brittan, a beautiful bay, which was taken from Gen. Delancy during the Revolutionary War, and run across King's Bridge. Hill's Black Hawk's dam was a three-quarter blooded English mare, weighed 1025 lbs., could trot a mile in less than 3 minutes, and was in every respect a most perfect animal. For more minute particulars, see Cultivator, June, 1845, page 196.

The Morgan Black Hawk's dam Peggy, is of a dapple brown color, of good size, and has often trotted a mile in less than 3 minutes. She was by the Woodbury or Burhawk Morgan; he by old Justin Morgan; Peggy's dam was a Jet Black Morgan Mare, of good size, a very fast trotter. The dam of Bulrush or the Justin Morgan, was a thorough bred mare, called Crazy Empress; she by American Eclipse, out of a thorough bred mare.

Acknowledgements.—We acknowledge the receipt of a barrel of most excellent Irish Potatoes, from H. G. S. Key, Esq. of St. Mary's. We never wish to taste a better potato. From Ira L. Bowles, of New Kent Co., Va., a bag of the Yam-Sweet Potatoes, very large and fine, but not as suitable to our market as the common variety of the Sweet Potato. Mr. B. Price, of Balt. Co., has left at our office a very perfect Turnip, weighing 7¼ lbs. From Mr. Jno. Q. Hewlett, a lot of exceedingly fine Carrots.

"The Post."—Some alteration having been made in the prospectus of this paper, it is republished on another page. The original and thrilling stories of Mrs. Southworth, who is engaged for the coming volume, will be worth the year's subscription.

Omission.—We omitted in the list of entries at the late Cattle Show, the Devon cow *Effie*, 6 yrs. old, with a calf at her side, and the Devon bull *Springfield*, 2 yrs. old, the property of A. B. Davis, Esq. By some neglect, they were not entered on the books at the ground, which was the cause of the omission—Effie and Springfield took the first premiums of their grade, and the calf of Effie, has since the Exhibition been sold for $100—Effie is believed to be one of the handsomest cows and best breeders in the country.

State Convention.—We observe in the proceedings of the Reform convention, now in session at Annapolis, that A. B. Davis, Esq. of Montgomery, is endeavoring to secure certain privileges of value to the farming interest.

For the American Farmer.

GUANO—AS APPLIED IN VIRGINIA.

As to *Wheat.*—The Guano should be spread broadcast at the time of seeding the wheat, at the rate of 200 to 250 lbs. per acre, and ploughed in. If the land has been previously fallowed, it will be sufficient to plough it in with a one-horse plough; if broken up for the first time, there will be no objection to using a larger plough. The best depth for getting it in, however, is, I think, from 4 to 6 inches. It always acts more powerfully on *clean* land; indeed, if there is much crude vegetable matter in the soil, there is frequently little or no advantage derived from its application. Experience, therefore, goes to show that the most economical application is to corn-land; that is, to land that has just produced a crop of corn, no matter how poor it may be. If it is intended to be put on land that has been lying in grass, it would be advisable to fallow it as early in the season as practicable, and afterwards to get in with a small plough, as already suggested. As soon as the Guano is ploughed in, the wheat should be sowed, and harrowed in in the usual manner. In our climate, we can sow wheat on the poorest corn ground late in November, and have as fine a crop, and harvest it as soon as we can obtain from well prepared fallowed land, without Guano, sowed early in the season. For every hundred pounds of Guano, not exceeding 250 lbs., we calculate on reaping, of an average season, from six to seven bushels; sometimes eight. From a greater quantity the product will be increased, yet it will not be increased in the same proportion, and 200 lbs. will also be sufficient for the production of two good grass crops following the wheat, and will then leave the land in an improved condition.

Oats.—The same directions will apply to *Oats*, and also to *Rye;* but for Oats alone, 125 a 150 lbs. will be as much as can be used to advantage.

Corn.—This is a gross feeder, and will take up a greater quantity of Guano than perhaps any other crop. I have known as much as 600 pounds applied to the acre, and the product was in proportion. Each 100 pounds will give an average product of 10 bushels, as various *experiments* have proved. From the above mentioned application of 600 pounds, a product of 73 bushels was obtained, which left 13 bushels as the product of the soil alone. For Corn, Guano may be spread broadcast on the land and ploughed in as deeply as it is desirable to break the soil, or it may be strewed along deep furrows, to be afterwards ridged over, and the cultivation to be in only one direction. The best result I ever obtained was from the latter mode, when from land not capable of producing 5 bushels to the acre, I harvested a crop that could not have been less than 35 bushels to the acre. The furrows were opened deep and wide by passing the plough both ways, and the Guano strewed along them at the rate of three-fourths of a pound for every 10 yards. They were then covered over, and the land thereby thrown into beds. But in whatever way it is used, the roots of the Corn will be sure to find it all; and between these two modes I think there is little or no choice. I would certainly advise against putting it in the hill, though I have sometimes seen good results. It is difficult, however, in such a case, to prevent the Guano and seed from coming into contact, and unless there are two or three inches of earth interposed between them, the seed will certainly be destroyed.

Tobacco.—The experiments with this crop have not been numerous enough to enable me to give positive directions. Indeed, as far as I have heard, the results have been very conflicting, and in most cases failures. But there is no actual reason why Guano should not act as well on Tobacco as any other crop. The failures are doubtless to be entirely ascribed to the injudicious manner in which it has been applied. I can conceive of only one mode in which it can be used to advantage, and that is, by strewing it along a deep furrow, as described for Corn; then bedding upon it, and confining the cultivation to one direction. This has been my way of cultivating *Cabbages* for the market for several years, and the Guano has always acted promptly and powerfully. If chopped in at the base of the hill, it would require a great quantity of rain to dissolve it and make it available to the young plants, for the conical shape of the hill has a tendency to shed the rain instead of absorbing it. I expect soon to receive very accurate results of a crop of Tobacco, grown with Guano, which is represented as a splendid crop. If I cultivated Tobacco, I should have every confidence of success by planting it on ridges, with the Guano buried at a considerable depth, say from 4 to 6 inches beneath the surface of the ridge. Three-fourths of a pound to 10 yards, would be a sufficient quantity.

In short, I consider Guano as good for every crop. For *Irish Potatoes*, I regard it as a specific manure. The quantity I apply is three-fourths of a pound to every 10 yards, put in the furrow as recommended for Corn and Tobacco, and then covered over about one inch with earth drawn from the sides of the furrow. After this, the potato cuttings are planted and covered over with the plough or hoe. The quantity recommended, is about right, as far as my experience goes, (which is of several years duration,) if the cuttings are placed about 10 inches apart. T. S. P.

Dinwiddie Co., Va., December, 1850.

[The above is from the pen of a gentleman who, we believe, has had longer experience in the use of Guano than any other farmer in Virginia. We are indebted for it to an esteemed friend in Petersburg, who forwarded it to us. We hope the writer will give us the result of the experiment on Tobacco, when received.—*Ed. A. Far.*]

For the American Farmer.

NOTHING IS LOST—NOTHING IS DESTROYED.

By Edw'd. P. Roberts.

Every thing around us—every thing above us—and all beneath us, give assurance of the beneficent wisdom of a superintending power—of the existence of a divine and unchangeable law, which renders it impossible that anything can be lost, or that any thing can be destroyed.

If to human eyes things appear to have been lost or destroyed, it is but an illusion; they have merely passed from one state to another, and are symbolic of the transition which marks the passage of humanity from time to eternity. The grave may close over a human being, but while his spiritual part wings its flight to another and a better world, all that was mortal remains, is interred in the earth, there to be dissolved into its original elements, to minister again to the creation of other bodies, and thus perform its mission anew.

The fuel which is consumed by man in the economies of life, is not lost—three per cent. of its *inorganic* substance remains; this fractional part of its integral whole, performs its office in giving

form to new entities,—while the *organic* portion, embodying a per centum of ninety and seven in the hundred that had formed its normal structure, soars aloft, to mingle its murky clouds with the air; but it is not lost; it is restored again in rains, and dews, in hails and snows, to enrich and fertilize the earth, and give shape and pressure to some new creation of the hand of God.

The beasts and serpents of the forest, of the jungle, and of the field—the birds of the air, and of the waters, the fishes and monsters of the deep, the insects of earth and of air, and the plants and trees, may wither and decay; they may all, all, putrify and pollute the air with their pestilent and noisome vapors—but these vapors are not lost—neither are they destroyed—they ascend, for a time, to mingle in mid-air with kindred substances; but each refreshing shower, at the bidding of the Omnipotent, bears them back to earth, to increase its fruitfulnesss, and to live again through another limited career of vitality.

But for the operations of this munificent and all-reaching statute, which dates from the beginning of creation—extends through all space—and is executed by its all-seeing author, the earth, which man inhabits, and cultivates, would, long since, through his improvidence, have been impoverished and rendered a barren waste.

When man looks abroad, and beholds the innumerable evidences of the existence of this mysterious power—this unseen, though paternal care—when he reflects, that though six thousand years have revolved since our first parents were placed in the garden of Eden; and that with all his self sufficiency—all his assumed knowledge of the arts—all his progressive strides in the mastery of the sciences,—such is the contracted sphere of his wisdom, that he cannot even at this day, with all his enlightenment, explain the mystery by which a plant bursts into existence, nor add one tint to that beauteous arch, which encircles the heavens, as a harbinger, and as a messenger, to tell of the cessation of the storm. We say, when man sees these evidences of his impotency—when he contrasts his own imbecility and weakness, with that colossal, immense, power, which unseen, and in silence, directs the immeasurable, the countless works of creation, he should bow down in a spirit of profound, of reverent humility—his heart, in its deepest recesses—in its purest fountains, should be filled with emotions of gratitude and love for that Being, to whose mercy, and not to his own merits, he is indebted for so many blessings—so many manifestations of kindness, and so many marks of parental care and solicitude.

Moral.—Seeing the beautiful economy with which the Creator husbands every thing which can be utilized for the benefit of his creatures, should not every one engaged in agriculture, feel the example as being of so forceful—so imperative—a nature, as to consider himself bound to save every thing that can be converted into manure, in order that the earth may be continued in the same degree of fruitfulness, that it was when bestowed upon man by the divine hand by which it was formed? Love and gratitude conspire to point to this course as a matter of duty, and as a grateful acknowledgement of the blessings conferred; while the comfort and welfare of those dear to one, should act as aditional stimulants, to induce the fulfilment of the obligation imposed by the relation in which he stands to the donor.

FISH IN COMPOST.

Four thousand herrings, alewives, or the equivalent of that number, in weight, of any other kinds of fishes, if formed into compost with 20 double horse-cart loads of *peat, marsh, river, or pond mud,* or *woods-mould,* would convert the mass, in six or eight weeks, into a body of efficient fertilizing manure.

The mode of forming the compost would be: *first,* a layer of the earth used, say 12 inches thick, over this spread a thin layer of fishes, sprinkle or sow over the fishes a portion of plaster, or pulverized charcoal, then earth, and so continue until the heap is completed: over the last layer of fish sow plaster or charcoal, and finish the heap by topping it off with 12 inches of the earth or material used, taking care to give a cone-like form to the heap, and dress up the sides, so as turn water, and prevent loss by the escape of the volatile gases.

Fish, as a manure, is supposed to be a very fleeting one. It is stated by some that it will last but for a year or two; but we believe, that its durability or continued effects in the soil, is dependent upon the care and skill with which the compost made from fish may be managed. If fish be formed into compost made of alternate layers of either peat, marsh mud, or any of the substances enumerated, or other substances containing undecomposed vegetable matter, plaster, or charcoal, and is permitted to remain until the animal part of the fish has become decomposed, then shoveled over, and fresh plaster be added, the carbonate of ammonia, will, by uniting with the sulphuric acid of the plaster, be transformed into the sulphate of ammonia, and, as such, be a comparatively fixed salt, and remain to be subsequently acted upon and taken up by the roots of the growing plants, to which it will gradually give supplies of nutriment,—and thus will its meliorating action be prolonged through several crops, assuring each year, highly productive yields.

If fish, however, be applied without any agent being used as a *fixer,* the ammonia, as formed, from its volatile nature, when in the carbonate form, will, very possibly, be expended with the first crop. But, under any circumstances, even those of injudicious composting, the *phosphate of lime* contained in the bones of the fishes, will last for several years; so also, will much of the nutritive, and most of the mineral portions of the earthy bases, which may be used.

Four thousand pounds of fish would yield, on decomposition, upwards of a hundred pounds of ammonia, the which, when added to nitrogenous and other matters to be found in the earthy bases comprised in such composts, would, if plaster or pulverized charcoal had been used as a *fixer* of the volatile principles, prove to be ample to fertilize an acre of land, and prepare it to go through a rotation of four or five years duration, productively, and profitably; at the end of which time the soil would be greatly better than it was at the commencement, provided clover, or grass had entered into the rotation, and followed wheat after corn.

We have no analyses of fish, to enable us to state in detail, what are its constituent elements, quantitatively and qualitatively; but we know that it consists of *bones,* and *gelatine,* oil, *animal, and other matter*—that the bones are softer than those of land animals, and will more readily decompose, and give out their phosphate of lime to the plants. And we know from anal-

ogy, that the animal matter must be very similar in constitution to the flesh of the ox, and other terrestrial animals, and as such is the case, that it is just as intrinsically valuable as manure. Now then, it is our purpose to show of what the organic parts of the latter consists, so as to arrive at the value, relatively to the former. Twenty-five per cent. of the bulk of fish, independent of its bones and fat, is composed of *fibrine*, a substance identical with flesh.

According to *Gay Lussac* and *Thenard*, 100 parts of fibrine are composed of carbon, 53.46, hydrogen 7.021, Oxygen 19.685, and *Nitrogen* 19.934.

According to *Mulder's* analysis, *fibrine* consists in 100 parts, of carbon 54.56, *Nitrogen* 15.72, Hydrogen 6.90, Oxygen, Phosphorus, and sulphur, 22.83.

So, let us take either of these analyses, and the conclusion is irresistibly fixed upon the mind, that a compost formed of fish, in the way we have proposed, would prove not only an excellent, quick acting, manure, but that its effects would tell for many, many years. We believe, that, when its gelatinous matters come to be taken into the account it will be found as rich in the elements of ammonia, or nearly so, as is guano: then why should it not prove a manure of great value? Why should it be neglected by those owning fishing shores? Why should the owners of such shores submit to *extortionate prices*, and *light weight*, in guano, when their own waters are filled with guano in the form of *fish*?

Of the comparative value of compost thus composted, we feel no hesitation in saying, that *one* load will go as far as would *two* of either stable or barnyard manure.

The following has been forwarded us by a correspondent at Washington, D. C.—who in a note expresses a doubt whether a speculation is not the main object in view in bringing the subject before the public—and suggests the propriety of an importation of a ton of the pozzolona, to test its value for agricultural purposes—Since the receipt, however, of the communication, we have noticed an arrival of a vessel at Alexandria, with a quantity of it on board, and no doubt some of our enterprising farmers will give it a fair trial, and report the result. *Ed. Am. Farmer.*

GUANO SUPERSEDED.—The St. Vincent Royal Gazette mentions that a gentleman of that island has sent to England a quantity of pozzolona to have it tested as a cement, and that he was agreeably surprised to learn that the chemist who tested it had declared it to be the best manure that had yet been discovered, and that it was far preferable to guano. The gentleman in question was complimented on having a mine of wealth superior to gold. When it is considered (says the Gazette) that the island abounds in this valuable substance—the best cement and, as it now appears, the best manure that is known—we cannot refrain from offering our public congratulations on the recent discovery, which must ere long bring great wealth into the islands by supplying them with an article which must be much needed by the sugar growers. Pozzolona from St. Vincent could of course be supplied here much cheaper than guano, and might, in consequence of its cheapness, be extensively used.

To the Editor of the American Farmer—

SIR: Observing the above article in the National Intelligencer of the 8th instant, I was highly gratified in the reflection, that at last we had a fertilizer near our own shores, that would prove a blessing to the farming interests of the adjoining states of Maryland and Virginia; and be the means of bringing the article of Guano within a remunerating price to the farmer. But from an examination of the formation of the article, unless the component parts of St. Vincents' pozzolona, are totally different from that of Italy, I doubt very much indeed, if any benefit whatever would accrue from its use as a fertilizer. The article is used generally to make what is called water lime cement, as it hardens almost immediately when mixed with a little common lime. Still, as there *may* be some property beneficial to agriculture in the article found in St. Vincents, it would seem to be no more than right that a fair trial should be made of it before condemnation.

Upon consulting Rees' Cyclopedia, Vol. 29, he states that pozzolona, (Italian) is a substance formed from volcanic ashes, more or less compact; of various colors; white, red, or black, reddish or reddish brown, grey, or greyish black: *the red variety is the proper pozzolona*—surface of the substance rough, uneven, and of a baked appearance—destitute of internal lustre and transparency—easily frangible—fracture uneven or earthy—commonly filled with particles of pumice, quarts and scoriæ—hardness 3.—very brittle, Sp. qr. from 2.570, which is that of the black, to 2.785, rarely 2.8. *It is not diffusible in cold water*—does not effervesce with acids.

By Mr. Bergman's analysis it contains—

Silex,	55 to 60 per cent.
Argilacious earth,	19 " 20 " "
Calcareous earth,	5 " 6 " "
Iron,	15 " 20 " "
	94—106

Magnetic before being heated, but not afterwards.

Leaving the reader to form his own conclusions as to whether the analysis as here given contains elements by which vegetable matter could be increased or the soil ultimately renovated,

I remain, Sir, very respectfully,
Your obt. servt.
W. C. R.

Washington, Nov. 11, 1850.

Above is given the analysis of the *Italian Pozzolona*, and fortunately we have that of the Pozzolona in question, brought from the Island of *St. Vincent*, which will put all uncertainty upon the matter to rest, as to its particular composition, and show, at once, whatever may be its peculiar merits as manure, it never can be made to play the part of a *"substitute"* for Guano, and that, to set up any such pretensions in its behalf, is to attempt to impose too heavy a tax upon agricultural credulity to be borne with complacency.

The *Alexandria Gazette*, in announcing the arrival of the vessel with this cargo of *St. Vincent Pozzolona* on board, gives the following as the *analysis* of that substance, as made on that island.

It consists of the following elements:

Alumina (clay)	12.5
Sulphate of lime (plaster)	24.5
Carbonate of lime	19.5
Silica (sand)	33.5
Oxide of iron	10.0
	100.0

So then, according to the above analysis, this

boasted "*substitute*" for *guano*, has in its composition 46 per cent. of *clay* and *sand*, substances that can be found in every field in our goodly country, the which, though very well in their own peculiar offices, are none the better for being brought from the Island of St. Vincent. Of sulphate of lime 24.5 per cent., just as valuable, no doubt, as any other plaster—no more; and of lime it has 19.5 per cent., which abounds in our country, and, for agricultural purposes, can be bought for from 8 to 20 cents per bushel. Its only other constituent, is oxide of iron, which is to be found in almost every soil in our land.

We would now pray ask, what substance is there in it, that gives it virtues to qualify it to "supercede"! guano? Common sense and truth compels the answer—it has none. There is no affinity between the two substances, as the following analysis of Guano, made by *Voelckel* will prove:

Guano consists of	
Urate of ammonia	9.0
Oxalate of ammonia	10.6
Oxalate of lime	7.0
Phosphate of ammonia	6.0
Phosphates of ammonia and magnesia	2.6
Sulphate of potash	5.5
Sulphate of soda	3.8
Muriate of ammonia	4.2
Phosphate of lime	14.3
Clay and sand	4.7
Undetermined organic substances, of which 12 per cent. are soluble in water, a trace of salts of iron and water	32.3
	100.

We have felt it to be our duty to make this *expose*, and shall leave it to our readers to determine, whether it be their interest to buy an article for manure, that consists of 46 per cent. of *sand* and *clay*. *Editor of the American Farmer.*

FEEDING VIRTUES OF THE APPLE AND POTATO COMPARED.

We noticed in a former number, the analyses made by Professor Salisbury, of Albany, N. York, of the *apple*, and the comparative view he had given of the properties of the *apple* and *potato* for purposes of stock feeding; and we purpose now to make such extracts from Prof. S.'s very interesting paper, as seem to us to concern the *economies* of the farm, and regret that our space this month will not permit us to give the entire article, as it is profoundly interesting. We copy from the transactions of the New York State Agricultural Society:

The following is the MEAN *of* 6 *analyses made by Professor S.:*

	1000 parts of fresh apple.	1000 parts of dry apple.
"Cellular fibre,	32.03	190.879
Glutinous matter, with a little fat and wax,	1.94	11.463
Dextrine,	31.44	186,805
Sugar and extract,	83.25	497.627
Malic Acid,	3.17	19.585
Albumen,	13.79	83.720
Cassein,	1.64	9.21
Dry matter,	167.26	1000.000
Water,	826.64	
Loss,	6.10	
	1000.00."	

"The ripe apple is rich in sugar and a body analagous to gum, called *dextrine*, which has the same composition as starch; but differs from it in being soluble in cold water, and not colored blue with iodine. It derives its name from the action of its solution on polarized light, it causing the plane of polarization to deviate to the right; hence its name—*dextrine*."

"Dextrine and gum should not be confounded with each other. They differ very materially in many respects. The former possesses the property of being converted into grape sugar by sulphuric acid and by diastase, while the latter does not.—Dextrine belongs to the class of bodies which are susceptible of nourishing the animal body. All the starch taken as food is converted into dextrine before it is assimilated by the system. The acids of the stomach possess the property of converting starch into this body."

"In the *fresh* APPLE, 100 lbs. contain about 3.2 lbs. of fibre; 0.2 of a lb. of gluten, fat and wax; 3.1 lbs. of dextrine; 8.3 lbs. of sugar and extract; 0.3 of a lb. of malic acid; 1.4 lb. of albumen; 0.16 of a lb. of casein, and 82.66 lbs. of water."

"In the *dry* APPLE, 100 lbs. contain about 19 lbs. of fibre; 1.1 lb. of gluten, fat and wax; 18.7 lbs. of dextrine; 49.8 lbs. of sugar and extract; 2 lbs. of malic acid; 8.4 lbs. of albumen, and 1 lb. of casein.

In the *fresh* POTATO, 100 lbs. contain about 9.7 lbs. of starch; 5.8 lbs. of fibre; 0.2 of a lb. of gluten; 0.08 of a lb. of fatty matter; ¼ of a lb. of albumen; 0.45 of a lb. of casein; 1.27 lb. of dextrine; 2.64 lbs. of sugar and extract, and 79.7 lbs. of water. In the *dry* potato, 100 lbs. contain about 48.5 lbs. of starch; 29 lbs. of fibre; 1 lb. of gluten; 0.4 of a lb. of fatty matter; 1.25 lb. of albumen; 2.25 lbs. of casein; 6.32 lbs. of dextrine, and 13.2 lbs. of sugar and extract."

"By comparing the composition of the *apple* with that of the *potato*, it will be noticed: *First.* That the former contains, according to the above analyses, about 3 per cent. more of water than the latter. *Second.* That dextrine and sugar in the apple take the place of starch, dextrine and sugar in the potato. Of the former, 100 lbs. of good fruit contain of dextrine, sugar and extract 11.4 lbs.; the latter has in the same amount of fresh tubers, 13-61 lbs. of starch, dextrine, sugar and extract. In the dry fruit, 100 lbs. contain of dextrine, sugar and extract, 68.5 lbs.; in the same quantity of dry potato there is of starch, dextrine, sugar and extract, 68.02 lbs. The above proximate principles are the main bodies in the apple and potato which go to form fat. In the aggregate amount, then, of fat producing products, it will be seen that the apple and potato do not materially differ. It will be natural, however, to infer that 50 lbs. of dextrine and sugar would, if taken into the system, be more likely to make a greater quantity of fat in a given time, or at least to make the same amount in a shorter period, than an equal weight of starch, for this reason, that the two former bodies, although nearly the same in composition with the latter, yet are physically farther advanced in organization, and hence probably approximate nearer the constitution of fat. If this view be taken, then the apple, if of good quality, may be regarded equally, if not more rich in fat producing products than the potato. *Thirdly.* That the apple is richer in nitrogen compounds than the potato. 100 lbs. of *fresh* apple contain albumen 1.38 lbs.; the same amount

of fresh potato has ¼ of a lb. 100 lbs. of *dry* apple contain 8.37 lbs. of albumen, and an equal weight of *dry* tubers has 1¼ lb. 100 lbs. of fresh fruit contain of casein 0.16 of a lb., and an equal weight of fresh tubers, 0.45 of a lb. 100 lbs. of *dry* apples have 1 lb. of casein, and the same amount of dry potatoes contains 2¼ lbs. Hence it will be observed, that 100 lbs. of *fresh* apple contain of albumen and casein 1.54 lbs., and the same quantity of *fresh* potato 0.7 of a lb. 100 lbs. of *dry* fruit have of albumen and casein 9.37 lbs., and an equal amount of dry tubers, 3.50 lbs."

"From the above it will readily be seen, that in albumen the apple is richer than the potato, while in casein the reverse is the case. That the aggregate amount of albumen, casein and gluten in good varieties of the apple is more than double that of the same bodies of the potato; hence the former may be regarded *richer* than the latter in those bodies which strictly go to nourish the system, or in other words, to form muscle, brain, nerve, and in short assist in building up and sustaining the organic part of all the tissues of the animal body."

BENEFIT OF CLAYING AND MARLING.

Mr. *Rodwell* in Suffolk, England, has distinguished himself by covering the surface of heath-land with clay and marl to a very great extent. With only two leases of 28 years duration, he clayed and marled 820 acres, and used about 140,000 tumbril loads, which at 8½ d. per yard, cost him £4,958. Having taken a third lease, in about 49 weeks, he employed 11,275 cubical yards of *clay* more in covering the soil. He *prefers clay to marl on sandy soils;* some of which consist of coarse, poor, and even black sand. The result was highly satisfactory: £350 per annum were added to the value of the estate, which, at 30 years purchase, is £10,500; and the public was benefitted by the production of more corn, meat and wool, to the amount of £30,000 in 28 years succeeding the improvement, than in the 28 preceding it.

Sir John Sinclair's Code of Agriculture.

Remarks by the Editor of the American Farmer.

The above may be said to present but a single fact, in support of the theory which teaches us that an improvement can be effected on light sandy lands by the application of clay, but still it is a strong one, and there are hundreds of others equally impresssive. Here we find a *tenant*, so well satisfied with its efficacy, that he expended many thousand pounds in claying a farm which he held under a *lease;* and as the figures show, derived an *increased* value in products, during the term of that lease, 28 years, which amounted in our currency to $150,000.

It is now many years since we advanced the doctrine, that 10 loads of manure mixed with 10 loads of clay, would do more towards fertilizing an acre of sandy land, than would 20 loads of manure applied alone. And it is upwards of twenty years since a friend of ours, acting under our advice, restored a field of twenty acres of worn out sandy land to productiveness, through the following means; which, in fact involves the same principle, as that acted upon by Mr. Rodwell.

The surface soil was a light sand, about 4 inches in depth, resting upon a tenacious, dry, reddish clay subsoil. It had been cultivated for half a century upon the *skimming* and *skinning* plan, of *ploughing only three or four inches in depth, putting but little manure on, and taking all out* that its poverty stricken condition enabled it to produce.

Corn manured in the hill, rest, and *oats* had been the rotation or robbing system pursued for an age before it came into our friend's possession.

Our advice to him was to this effect: that so soon in the fall as he could address himself to the work, to have the field turned up carefully 6 inches deep, and thus bring up 2 inches of the "*hard pan*" in order that it might be exposed to, and meliorated by, the frosts of winter—that as soon after it was ploughed as possible, to spread thereon 50 bushels of lime per acre, to neutralize any unfriendly mineral or vegetable substances that might be in the sub-soil, and set free those that were friendly: that as early in the spring as the frost was out of the ground, he should harrow, cross-plough, and harrow his field, then give it a *full drssing* of the best *nutritive manure* he could command; plough that in to the depth of the furrow, harrow, and finish by rolling; when his field would be fit to receive and nurture a corn crop, such as it had not borne for many years; and that after the field had remained two years in clover, to plough it up to the depth of 8 inches, and apply 50 bushels more lime to the acre.

Our advice was followed; *but not without serious misgivings of the result, though that result proved all that we anticipated, or our friend could have desired.*

The "*poison*" of the two inches of "hard till," if there were any, did not manifest itself by any visible signs, and he made 8 barrels of corn per acre, where more than three had not been made before for many, many years.

The succeeding crop was *wheat* followed by clover, both of which bore evidence that permanent improvement had been effected.

Now, to our mind it is clear, that the improvement produced, was owing to a combination of causes.

First, to the clay, its thorough admixture with the sand, having imparted to the soil a texture of sufficient consistency to resist the exhalations of the sun; thus retaining a healthful degree of moisture in the soil, and preventing the escape of the enriching gases, consequent upon the decay of the manure applied, and of retaining them in store for the plants, as they might be called into use by their progress to maturity.

It is possible, also, that, in the course of the culture, much of the original mineral portions of the surface soil had percolated through the sand, sunk into the clayey subsoil, and got beyond the reach of the plough. If this supposition be correct, and we think it is, then the inference is a natural one, that in the upturned two inches of clay, there were certain mineral salts, healthful in their nature to vegetation, and of which the surface soil, owing to its want of tenacity, and to the scourging course of culture to which it had been subjected, had become deficient; and that these, when acted upon by the lime and atmosphere, were rendered efficient meliorating agents.

Secondly. That in applying the *lime*, an element, of which it was probably destitute, was supplied to the soil, which was essential alike to the neutralization of acids and salts, and to the effective operation of the already prepared nutritive manures, as well as to the conversion of the inert matters of the soil into food.

Thirdly. The increased depth of tillage, gave to the plants superior facilities for feeding; increased the absorbing powers of the soil, and imparted to it a greatly augmented capacity for production, inasmuch, as its improved physical condition enabled it

the better to economise and dispense the fertilizing manures.

The effect of this commingling of the two inches of subsoil clay with the four inches of surface sand, operated to transform what had been theretofore an exhausted, hungry, porous sand, incapable of retaining either moisture or nitrogenous manures, into a sandy mould, of sufficient physical tenacity of texture, and chemical powers, to husband both: and if no other benefits had enured, these, of themselves, were ample remuneration for all the expense incurred, and labor bestowed, in turning up the clay and incorporating it with the surface soil. But as we have before suggested, it is probable that in the inverted clay, there were found valuable mineral substances, as potash, soda, besides other alkaline matters, the which, by the united action of the lime and atmosphere, were converted into efficient improvers of the soil.

We allude to the before recited facts, in the hope, that they may encourage others, who have similarly constituted soils, to pursue like means to effect their improvement. And we will conclude by remarking, that we consider exposure to the frosts of winter, and the application of lime, as indispensable prerequisites to success, in all attempts which may be made to effect improvement of lands of a kindred nature.

FARM MANURES AND THEIR MANAGEMENT.

We copy the following chapter on "*manures from domestic animals and their preservation*" from the recent work of Professor *Norton*, entitled "*Elements of Scientific Agriculture*"—a work that not only ought to be bought, but *read*, and *studied*, by every agriculturist in the country:

"The manure of various domestic animals is, in this country, most commonly employed as a fertilizer, all other manures being used in comparatively small quantities; and yet even these are seldom preserved and applied so carefully as they might or ought to be.

The principal varieties are those of the ox, the cow, the hog, the horse, and the sheep. Of these, that of the *horse* is most valuable in its fresh state: it contains much nitrogen, but is very liable to lose by fermentation. That of the *hog* comes next. That of the *cow* is placed at the bottom of the list. This is because the enriching subtances of her food go principally to the formation of milk, the manure being thereby rendered poorer."

"The manure of all these animals is far richer than the food given them, because it contains much more *nitrogen*. This is for the reason that a large part of the carbon and oxygen of the food are consumed in the lungs and blood generally, for the purpose of keeping up the heat of the body. They are given off from the lungs, and also by perspiration and evaporation through the pores of the skin, in the form of carbon and water."

"From animals fed upon rich food, the manure is much more powerful than when it is poor. In England for instance, where they fatten cattle largely on oil-cake, it is calculated that the increased value of the manure repays all of the outlay. This is the reason why human ordure is better than manure from any of the animals mentioned above, the food of man being rich and various.

"All these kinds of manures should be carefully collected and preserved, both as to their liquid and solid parts. The liquid part or urine is particularly rich in the *phosphates* and in *nitrogen*. This part is by very many farmers permitted in a great degree to run away or evaporate. Some farm-yards are contrived so as to throw the water off entirely, others convey it through a small ditch upon the nearest field. The liquid manure which might have fertilized several acres in the course of the season, is thus concentrated upon one small spot, and the consequence is a vegetation so rank as to be of very little use. Spots of this kind may be seen in the neighborhood of many farm-yards, where the grass grows up so heavy that it falls down and rots at the bottom, and has to be cut some weeks before haying time, producing strong coarse hay that cattle will scarcely touch."

"The proper way to save this liquid is to have a tank or hole, into which all the drainings of the yard may be conducted. If left here long, this liquid begins to ferment, and to lose nitrogen in the form of ammonia, which it will be remembered is a compound of nitrogen and hydrogen. To remedy this, a little sulphuric acid, or a few pounds of plaster may occasionally be thrown in. The sulphuric acid will unite with the ammonia, which will remain unchanged, not being liable to evaporate. Others prefer to mix sufficient peat, ashes, sawdust, or fine charcoal, with the liquid in the tank, to soak it all up; others still pump it out and pour it upon a compost heap. One point is to be noticed in the management of a tank. Only the water which naturally drains from the stables and yards should be allowed to enter it: all that falls from the eaves of the buildings should be discharged elsewhere. Regulated in this way, the tank will seldom overflow, and the manure collected in it will be of the most valuable and powerful description. The tank may be made of stone, brick or wood, as is most convenient, and need cost but very little."

"While the liquid manure is actually in many cases almost entirely lost, the solid part is often allowed to drain and bleach, until nearly every thing soluble has washed away, or is exposed in heaps to ferment without any covering. In such a case ammonia is always formed and given off: it may often be perceived by the smell, particularly in horse manure. The fact may also be shown, by dipping a feather in muriatic acid, and waving it over the heap. If ammonia in any quantity is escaping, white fumes will be visible about the feather, caused by the formation of muriate of ammonia. This escape of so valuable a substance may be in a great measure prevented by shoveling earth over the surface of the heap, to a depth of two or three inches. If this does not arrest it entirely, sprinkle a few handfuls of plaster on the top: the sulphuric acid of the plaster will as before unite with the ammonia, and form sulphate of ammonia."

"Manures containing *nitrogen* in large quantities are so exceedingly valuable, because this gas is required to form gluten, and bodies of that class, in the plant: this is particularly in the seed, and sometimes also in the fruit. Plants can easily obtain an abundance of carbon, oxygen and hydrogen, from the air, the soil and manures. Not so with nitrogen. They can not get it from the air: there is little of it in most soils, and hence manures which contain much of it, produce such a marked effect. Not that it is more necessary than the other organic bodies, but more scarce; at least in a form available for plants. The same reasoning applies to phosphoric acid. It is not more necessary than the other inor-

ganic ingredients, but still is more valuable, because more uncommon in the soil and in manures."

"In all places where manure is protected from the sun, and from much washing by rain, its value is greatly increased."

"*Horse-manures* particularly should not be left exposed at all: it begins to *heat* and to *lose nitrogen* almost immediately, as may be perceived by the smell. It should be mixed with other manures, or covered by some absorbent earth, as soon as possible. Almost every one who enters a stable in the morning, where there is many horses, must perceive the strong smell of ammonia that fills the place. I have seen in some stables, little pans containing plaster of paris or sulphuric acid, for the purpose of absorbing these fumes, and forming sulphate of ammonia. The liquid which runs from barn-yards and from manure heaps, is shown by analysis to consist of the most fertilizing substances; and it is calculated that where this is allowed to wash away, as is the case in many instances, the manure is often reduced nearly one half in its value. I have seen yards where it was almost worthless, owing to long exposure."

"The farmers of this country need awakening upon the subject of carefully preserving their common manure. In *Flanders* every thing of the kind is saved with the greatest care, the *liquid* manure of a single cow for a year is valued at $10; *here* it is often allowed to escape entirely. *Either they are very foolish, or we are very wasteful.*"

AS TO THE BEST BREED OF SHEEP. HOW MANY TO AN ACRE, &c.

Mr. Editor.—Being a young farmer, and wishing to obtain as many sheep as I can keep, I am induced to ask your opinion as to the best breed, and how many can be kept on a farm of 200 acres, devoted principally to grass. Some recommend the Merino, others the Southdown. Please give your opinion and you will at least oblige one

Clifton, Va., Sept. 1850. SUBSCRIBER.

We shall endeavor to reply to the above queries in the order in which they are put; but are not presumptuous enough to undertake to decide the question as to which breed of sheep is best for our correspondent. To enable us to do that, we should be put in possession of the locality of his farm, its character and capacity for producing sheep walks or pastures, the object he has in view, whether it be the sale of wool, or mutton, and what the facilities of transportation to market. If the growing of wool be his object, we would say, as between *Merinoes* and *Southdowns*, that the preference should be given to the former, as the value of their fleeces is incomparably greater, the wool being much finer and better adapted to the manufacture of fine goods. If the production of *mutton* be his object, we should say, that the *Southdowns* are preferable to the *Merinoes*, though the latter afford excellent mutton and more of it: but for delicacy of flavor, rich, juicy meat, there is nothing in our humble judgment, equal to that afforded by the Southdown. The New Leicester, the Cotswold, and Oxfordshire, and other large long coarse wooled breeds, will yield more mutton and more wool to the carcass, but then as they are large, they require more food to grow them, and of course an acre will support a less number of them. The Cotswold sheep bears a heavy long wooled fleece, so does the Liecester, and by many their meat is highly appreciated, particularly that of the former breed, but so far as our individual judgment goes, the Southdown mutton is best, while their fleece, though less in bulk, is of greater value per pound.

With regard to the question "how many can be kept on a farm of 200 acres principally devoted to grass?" we reply, that a pasture *well set* in grass should sustain from 3 to 5 sheep throughout the grazing season, the owner however, would in addition, have to provide winter provender during that season, and we think it may safely be assumed, that it will require a daily allowance of 3 lbs. of hay or some kind of long provender to sustain each head of sheep, or the equivalent of that quantity, when grain or roots may be fed in addition to long provender. Pastures devoted to sheep-walks should be divided into several enclosures, so as to allow of a *change* of pasture every few weeks, such change being highly conducive to health. Each, if possible, should be supplied with good soft water.

As the expense of stocking 200 acres with high priced sheep, would be very heavy, we would respectfully suggest whether it would not be better to procure a few bucks of the breed to be fixed upon, and thus by breeding the grade ewes to full bred bucks, avoiding in and in breeding, after the fourth cross, the issue would be nearly as good as the genuine, having probably an invigorated constitution. To produce this result, care should be taken to select good native ewes to begin with. By this process, if the Merino bucks should be used, the wool of each succeeding cross would be improved in fineness and value, whereas, if it were the Southdown, the quality of the mutton would feel the meliorating influence of each increase of blood.

For the American Farmer.

CULTURE OF THE PARSNIP.

BOSTON, Sept. 28th, 1850.

A good crop of Parsnips in Guernsey is considered about 22 tons per English acre. This is a less heavy crop than the turnip, but is much more considerable than that of either the carrot or potato; and if it be considered that the quantity of saccharine, mucillaginous, and, generally speaking, of nutritious matter in the Parsnip, bears a far greater proportion to the water than it does in the turnip, its superiority in point of produce will appear in this case, also, to be greater. The quantity allowed for fattening an ox is 120 lbs. per day, exclusive of hay. It is found to fatten quicker than any other vegetable. Hogs prefer this root to all others, and it makes excellent pork, though the process of boiling renders the bacon flabby. The animal can be fattened in 6 weeks on this food. Too much can hardly be said of the beef and pork fattened on Parsnips. In July, 1834, a porker was exhibited in the Guernsey market, of 22 months, weighing, neat, 733 lbs. English, which had never taken anything but raw Parsnips and sour milk, and finer meat was not often seen. In the use of Parsnips, one caution is absolutely necessary: they are never to be washed, but to be given as they are taken out of the ground. Used in this manner, they are found not to surfeit the hogs and cattle, and to fatten them better and quicker than they otherwise would; if washed, they are apt to satiate, and will, as the farmers say, never thoroughly fatten. Upon the whole, the weight of the crops are undisputed—the superior quality of the cows; the excellency of their milk; butter, meat and vegetables equally so. 10,000 acres in Guernsey keep 12,500 milch cows; which produce, one with the other, each 5 lbs. of

butter per week; this, at 24 cts per lb., or its value in milk, amounts to £32,500—of which, three-fourths are sold in the towns, 550 cows are exported, and that number of fat cows or oxen slaughtered, and about 5,000 porkers are either exported or sold to the towns. The quantity of vegetables, fruit, poultry and eggs brought to market is prodigious, and 100,000 bushels of potatoes may be estimated to be exported or distilled annually. The cider of the Island is of the best quality, and from 500 to 1000 hogsheads are annually exported.

In small farms alone, and among the wives and daughters of the occupiers, are to be found that superior care and economy required for the successful rearing and feeding of calves, pigs and poultry, and the good management of the dairy. The rotation of crops generally observed, gives two crops of wheat in five years. The usual course is that of parsnips, wheat, barley, clover and wheat, the greater product of wheat being after parsnips. The usual produce of wheat in England is estimated at 24 bushels; in Guernsey, at 33 bushels to the acre. In the former, in some cases, 40 bushels to the acre have been produced; and in the latter, in a field of 2½ acres English, 134½ Winchester bushels, or 54 bushels to the acre.

METEOROLOGICAL TABLE,

From the 21st of November, to the 20th of December.
Kept at Schellman Hall, near Sykesville, Carroll County, Md.
Taken at 6 o'clock, a. m., 3 o'clock, noon, and at 6 o'clock.

	Wind.			Temperature			Remarks.
21	N	NW	W	32	45	32	Clear [the night 1-4 in.
22	N	E	E	35	42	36	Clear, cloudy, snow fell during
23	NE	NE	N	33	34	34	Cloudy, snow rain
24	N	NW	NW	34	46	34	Clear
25	N	E	E	33	45	42	Clear
26	W	N	S	38	59	57	Rain, 1-4 in. clear
27	S	S	S	55	72	65	Clear
28	S	S	S	59	75	63	Clear, shower, cloudy, rain 1-4in.
29	S	S	S	63	62	60	Cloudy, Rain
30	N	N	N	44	55	45	Cloudy
1	N	NE	NE	33	50	45	Cloudy
2	N	NE	SE	43	50	50	Cloudy
3	E	SE	SE	48	54	55	Rain 1-4 in. clear
4	E	NE	E	44	45	44	Rain ¼ in. fine rain
5	E	N	NE	44	50	47	Rain, fog, rain 1 in.
6	NE	NE	NE	38	34	35	Cloudy, rain, rain very hard all
7	NE	NE	NW	35	40	37	Rain 4 in. clear [night
8	W	N	W	30	32	29	Clear
9	W	SE	SE	18	38	34	Clear
10	N	NW	W	34	37	35	Clear
11	SW	SW	SW	29	55	40	Clear
12	S	NE	S	36	56	49	Clear
13	N	NW	NW	27	30	18	Clear
14	N	SE	S	10	30	21	Clear
15	SE	NE	N	28	42	35	Clear, cloudy
16	N	NE	SE	32	40	44	Rain, fog, rain, ⅛ in.
17	N	NW	NW	37	40	35	Clear
18	N	N	SW	24	40	35	Clear
19	SE	SE	E	34	39	34	Rain 1 in.
20	N	W	W	39	40	34	Cloudy

REVIEW OF THE TOBACCO & GRAIN MARKETS.

Reported for the American Farmer by J. W. & E. Reynolds.

There has been very little doing in the Tobacco market for the past month, the transactions being chiefly confined to Ground Leaves, and a few hhds. of dark heavy crops, suitable for home consumption. The prices paid for Ground Leaf are from $5½ to $12, as to quality, very few hhds. commanding over $8. Dark heavy crops still continue high and sell readily at from $6 a $8. Nothing doing in the finer qualities of seconds and crop.

We quote white and yellow Corn at 55 a 57 cts.; Oats, 33 a 37c; Rye, 60 a 65c.

Wheat—Reds, 90 a 102c; white, 95 a 106c; family flour white $110 a 115.

Guano—Peruvian $48 per ton of 2000 lbs.—Patagonian $38, do. Supply moderate, but the arrivals expected will furnish sufficient for the demand.—We think the rates will be likely to continue as above for the spring supply.

AGRICULTURAL IMPLEMENT DEPOT
And Produce Store.

TO facilitate and render this business more convenient for his customers and himself, the subscriber has taken a convenient and commodious Warehouse in Baltimore, as a depot and sale place for all the various Agricultural Implements manufactured at his shops in Carroll County; also, to sell the products of his Farms, Mill and Foundry.

The following articles of his own manufacture and produce, he will endeavor constantly to have there for sale, viz:

HORSE { Endless Chain or Tread, for 1, 2 or 3 horses.
POWERS { Levers or 2, 4 or 6 horses.

THRESHERS { With Seperator and Fan attached. / With Seperator only. / Without Seperator.

Wheat Fans, Corn and Cob Crushers, Corn Shellers of various kinds, (very superior;) Cutters for Hay, Straw and Fodder, (Richardson's patent;) Cornstalk Cutter and Grinder, (a new and the best article now in use;) Horse Rakes; Smut and Garlic Rubbers, (which is unequalled for its simplicity of structure and thorough operation on Wheat or Buckwheat;) Clover Seed Hullers; Ploughs of several kinds, but only such as are known to do the best work; Harrows and Cultivators, and various smaller implements for Garden and Field use. Castings for Blacksmiths—Firebacks, Tyre Benders, Blocks to make different forms by; Corn and Cob Crusher Castings for Mills; Saw Mill Castings; Cooking Stoves (new and different from any in this market.) Best Family, Extra and Com. Superfine Wheat Flour; Corn and Buckwheat Meal; Corn, Oats, Mill Feed, Seed Grain, Clover and Timothy Seed; Bacon and Lard; Potatoes, Apples, Butter, Eggs and Poultry. In short, everything we have to spare from the farms.

It is our design to make this establishment worthy of patronage, by adhering to our old motto, "Live and let live." I will give to the business here, all the personal attention possible, and when absent, my son and Mr. Jacob King, (who is an experienced and practical farmer,) will give it their undivided attention. My practical knowledge as a farmer, in the use of farming implements, enables me with judgment to recommend what we manufacture, and design to keep nothing for sale which will not give perfect satisfaction in its using. I therefore bespeak the patronage of the public, promising to work hard and cheap. Please call and judge for yourselves, at

No. 95 LIGHT STREET WHARF,

And in front of the small wharf where the Hugh Jenkins, Cambridge and other steamboats start from daily.

N. B. Address me in Baltimore, or at my residence, New Windsor, Carroll Co., Md.

Jan. 1 JAS. C. ATLEE.

GROUND PLASTER.

THE subscriber respectfully informs the Farmers and Planters that he is now receiving a large and selected lot of an extra quality of Lump Gypsum, direct from particular mines, (the purity of which he has had tested by various analyses) from which he is manufacturing a superior article of Ground Plaster, warranted pure, and each barrel of full weight and in good shipping order—marked with his own name. For sale on the most favorable terms.

WM. A. DUNNINGTON,
Steam Plaster Mill, G. Hughes st., on the Basin.

Orders received at CAPT. ASA NEEDHAM'S STORE, No. 104 Light street wharf. Sept1 tf

DRAINING TILE.

THE undersigned having purchased the right and Machine for the manufacture of DRAINING TILE, invented by the late Mr. Lovel, of Delaware, would respectfully inform farmers, planters and others, that they will be ready to supply any quantity of the Tile as early in the spring as the weather will permit the working of the clay. They will be made of various sizes, in bore and length, and furnished at $12 to $20 per thousand—the lengths of the Tile will be from 12 to 20 inches. Address SAM'L. SANDS, or JOHN KETTLEWELL,

Dec. 1-tf Baltimore, Md.

LIME.

THE subscribers are prepared to furnish Building and Agricultural Lime at the depot on the Back Basin, corner of Eden and Lancaster-sts., which they will warrant to give satisfaction, it being burnt from pure Alum Lime Stone, equal to any found in the United States. Orders may be left with WILLIAM ROBINSON, No. 15 Hollingsworth-street, near Pratt.

ft **FELL & ROBINSON**, City Block.

THE SATURDAY EVENING POST.

THE LEADING & LARGEST WEEKLY IN THE UNION.

THE SATURDAY EVENING POST is now, beyond all denial, the leading as well as the largest Weekly Paper in the United States. Its circulation is undeniably greater than that of any other paper, of the same kind, in the Union; while its literary contents are allowed, by the best judges, to be unsurpassed. Such tales as "The Deserted Wife," "Shannondale," &c., &c., have placed "The Post," by almost universal admission, a "head and shoulders" above its cotemporaries.

We now have the pleasure of announcing to the American public, that we have made arrangements with one of the

FIRST NOVELISTS IN AMERICA,

MRS. EMMA D. E. N. SOUTHWORTH, author of "RETRIBUTION," "THE DESERTED WIFE," "SHANNONDALE," etc., by which the productions of her gifted pen will be secured hereafter (with the exception of an occasional story in a Washington paper)

EXCLUSIVELY FOR THE POST.

Mrs. Southworth, as an American novelist of great power—a rising Star in the West—has been hailed with acclamation by all those who can recognize genius as well in a native as in a foreign author. We design to commence a

NEW NOVELET BY MRS. SOUTHWORTH,

About the beginning of the year. It will be entitled

Virginia and Magdalene, or The Foster Sisters,

A WINTER EVENING'S TALE.

How many novelets Mrs. Southworth will be able to furnish during 1851, will depend upon the state of her health, etc.

In the intervals of Mrs. Southworth's Novelets, we design publishing other and shorter Novelets from authors of admitted celebrity. We have two now on hand, which we shall publish as soon as possible:

THE IRON HAND, by T. S. ARTHUR, Esq.

THE TEXAN HUNTRESS, by C. W. WEBBER, Author of "Old Hicks, the Guide," "The Shot in the Eye," etc.

And mark this! What the proprietors of the Post promise, they perform—or do better. They do not announce a long list of distinguished contributors with whom they have made no arrangement, and whose stories never appear. Such a system may delude an intelligent public *one* year, but it will not answer a *second* time. If the public are humbugged *once*, it is the fault of the humbugger; if *twice*, it is their own.

In addition to such choice ORIGINAL articles, involving a large outlay of money, the columns of the Post will contain a great amount of Miscellaneous reading—such as the

CREAM OF THE FOREIGN PERIODICALS,

Witty and Humorous articles, Selections from the Agricultural Journals, Riddles and Conundrums, etc. etc.

REPORTS OF LECTURES—during the past year we gave the celebrated Lectures on Shakspeare by Mr. Dana; and the instructive and interesting ones of Dr. Baird upon Europe—Letters from Abroad—General News—Reports of the Markets—a Bank Note and Stock List, etc., etc.

One or more PORTRAITS of remarkable persons, or PICTURES OF REMARKABLE PLACES are also weekly given.

A MORAL PAPER.

In conclusion, we may say—that we shall maintain for the Post the character it has acquired of being a strictly moral paper; one that a parent may allow to go freely before his innocent sons and daughters. We need hardly repeat here, that the Post has done more to prevent the publication and sale of immoral works, than any half-a-dozen other papers in the land.—A careful guard shall also be kept, as heretofore, over our ADVERTISING COLUMNS, that nothing of an improper character may obtain admittance.

In short, whatever is calculated to refine, instruct, amuse, or gratify, shall find its appropriate place in the POST; and let the reader mark one thing, whatever others may *promise*, we will not be behind in the *performance*. A paper that has stood for twenty-nine years, steadily progressing all that time, and which has now the *largest* list of subscribers of any paper of the same class, in the United States, is not to be left behind in the race by *any* rival.

TERMS.

The terms of the POST are Two Dollars if paid in advance, Three Dollars if not paid in advance. For Five Dollars one copy is sent three years. We continue the following low terms for Clubs, to be sent, in the city, to one address, and, in the country, to one post-office.

4 COPIES,	. . . . .	$5 00	PER ANNUM.
8 "	(And one to Agent, or the getter up of the Club,) . . .	10 00	"
13 "	(And one to Agent, or the getter up of the Club,) . . .	15 00	"
20 "	(And one to Agent, or the getter up of the Club,) . . .	20 00	"

The money for Clubs must always be sent in advance. Subscriptions may be sent at our risk. When the sum is large, a draft should be procured if possible—the cost of which may be deducted from the amount. Address, *always post-paid*,

DEACON & PETERSON,

No. 66, South Third street, Philadelphia.

N. B.—Any person desirous of receiving a copy of the POST *as a sample*, can be accommodated by notifying the Publishers by letter, *post paid*. Jan. 1-1t *

GUANO.

PERUVIAN and PATAGONIA GUANO, late importation, and superior quality—for sale in lots to suit purchasers, by WM. ROBINSON,
No. 4 Hollingsworth street, near Pratt St. wharf.
Aug. 1. tf. Baltimore

GUANO.

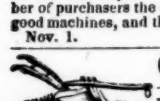
PERUVIAN, of the latest importations, per Kirkland & Jno. G. Coster. Also, Patagonian, No. 2 and 3, warranted equal to any in this city. Also, Ground Plaster in barrels.
For sale by S. FENBY & BRO.
aul Corner Gay and Pratt street.

HUSSEY'S MOWING AND REAPING MACHINE.

The subscriber in advertising his Mowing and Reap Machines, which are now being made with great improvements for another season, embraces this occasion to inform farmers at a distance that his machine received the highest premium from the Agricultural Society of the State of Maryland at a former Show, as well as from many other societies in the country on several occasions. For the information of farmers who may not be acquainted with the fact, the subscriber will state, that it is a standing rule with the Agricultural Society of the State of Maryland that no machine shall receive these premiums a second time, however superior it may be to all others. This fact will explain why an inferior machine will of course get the premium, although a better one be on the ground at the same time. It will be seen that the Society's premium was awarded at their late show in Baltimore to Mr. M'Keever of Winchester, Va., for a Reaper, which is of English origin. The first Reaper of the kind made in the country, known to the subscriber, was made by Robert Burns, Esq., merchant of the city of Baltimore, about ten years ago; another was made in New Jersey about six years ago by Woodward; the same machine is now revived by M'Keever. It will appear to farmers at a distance, who do not charge their memories with the rules and regulations of such bodies, that the Agricultural Society of the State of Maryland, have, in 1850, given the preference to the old English contrivance. The subscriber respectfully suggests to the members of that Society, whether their proceedings in the rule above named will not be likely in some cases to mislead distant farmers, who are looking up to the Society's proceedings for information. The subscriber's Reaper has been in use sixteen years; those farmers who purchased the first made in the State of Maryland thirteen years ago, are now getting new ones of the same stamp, with improvements.

The subscriber congratulates the farmers of the country, on the brisk competition now in the field; his own Reaper will be of course improved by it, to the advantage of a large number of purchasers the coming season, who are certain to get good machines, and the thanks of their friend,

Nov. 1. OBED HUSSEY.



C. H. DRURY, *Hollingsworth street corner of Pratt—Head of the Basin*—having completed his establishment with Foundry connected, for the making his own Castings, is prepared to furnish all varieties of *AGRICULTURAL IMPLEMENTS* and *CASTINGS*, made to pattern of the best material.

The following is a list of PLOWS kept constantly on hand: Davis, of the different numbers, for wrought and cast shears, S. & M., Chenoweth, Wiley, 2 and 3 furrow, No. 0, Hill side, No. 1 and 3 Connecticut—Beach Improved or Posey Plow, with common Davis cast shear—Self-sharpener or wrought shear—Corn Cultivators, plain and expanding—Tobacco do.—Wheat Fans—Corn sheilers with double hopper—Old Vertical and Virginia sheller—Harrows—superior Pennsylvania made Grain Cradles—Revolving Horse Rakes—Cylindrical straw Cutters, &c. &c. Horse Power *GRIST MILLS*, a very useful and saving article, and coming into general use. *HORSE POWER AND THRESHING MACHINES*, of these I need not say any thing, as wherever they have been in use any time, they are preferred to all others.

C. H. D. will this year make a smaller size Power & Thresher, (price of Power, $100, Thresher, $50, Band, $10, or when taken together, complete, $150 cash.) Persons in want of Implements made of the best material, and put together in the strongest and best manner to answer the purpose for which they are intended, are invited to call on the subscriber. jel

WILLIAM HARRIS.

GUN, RIFLE AND PISTOL MANUFACTURER, No. 65 South st., 1 door from Pratt st., Baltimore.

W. H. keeps constantly on hand a large assortment of Bird and Ducking Guns, (double and single barrel;) Six barrelled Revolvers; Rifles made to order; Dupont's Gunpowder; Powder Flasks; Bird Bags; Shot Belts and Pouches, and many other articles necessary for Sportsmen. Repairing done at the shortest notice, and with neatness. Dec. 1-6m

A. G. MOTT.

AGRICULTURAL IMPLEMENT MANUFACTURER,

No. 38 *Ensor street*, near the Belair Market, Baltimore. Plows, Cultivators, Harrows, Wheat Fans, Straw Cutters, Grain Cradles, and all of the best and most approved Agricultural Implements in use.

☞ AGENT for the celebrated N. York Wiley and Empire Plow Castings. mar 1

THE BEST and MOST VALUABLE Agricultural Implements and Machinery exhibited at the State Fair in 1850, will be seen by the award of Premiums below:

AWARDED TO E. WHITMAN, JR.

Light street, corner of Pratt, Baltimore,

BY THE

MARYLAND STATE AGRICULTURAL SOC'Y,

At their Third Annual Fair, held in Baltimore, 23d, 24th and 25th October, 1850.

For the best Plow in the Plowing Match, the Prouty & Mears, No. 5½,	$10 00
For the best Plowing, with Ox Team, same Plow—Special Premium,	2 00
For the best 2 horse Plow in the field—Ruggles, Nourse & Mason, No 3, 1st Premium,	8 00
For the best Railway Horse Power, Whitman's Improved, 1st Premium,	15 00
For the best Hay Press, 1st Premium,	25 00
For the best Corn Sheller, the Virginia pattern, improved by E. Whitman, 1st Prem.,	4 00
For the best Field Rollers, 1st Premium,	8 00
For the best Corn Stalk Cutters and Grinders, 1st Premium,	5 00
For the best Churns, 1st Premium,	4 00
For the best Hay and Manure Forks, do	2 00
For the best Hay Rakes, do	2 00
For the best Cultivator, do	4 00

Having been awarded at the above named Fair a greater amount in premiums than any other exhibitor of Agricultural Implements, it would seem that our Implements and Machinery were considered by the several committees the BEST and most valuable on the ground, and to whom belonged the premium for the largest display, I will submit to visitors of the Fair.

At the great FAIR OF THE MARYLAND INSTITUTE for the Promotion of the Mechanic Arts, held in Baltimore in October and November, 1850, the FIRST PREMIUM, *a heavy Silver Medal*, WAS AWARDED TO

EZRA WHITMAN,

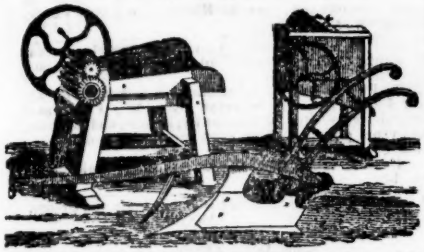
FOR THE LARGEST AND BEST DISPLAY OF AGRICULTURAL IMPLEMENTS.

Also, FIRST PREMIUM, (another *Silver Medal*,) for his Improved Wrought Iron Railway Horse Power, which was made for Exhibition at the WORLD'S FAIR, to be holden in London, May, 1851. Dec. 1

MOORE & CHAMBERLAIN or *DELAWARE PLOWS*, constantly on hand and for sale, wholesale and retail, at manufacturers' prices, by E. WHITMAN, JR.,
Dec. 1 55 Light street, Baltimore.

HAMBLETON & DIDIER,

No. 57 Calvert street, and 57 Cheapside, near Pratt street, Baltimore.



We would call the attention of our friends and the public generally, to our collection of Implements, composed of the best material and workmanship combined with the most modern and improved designs.

We have on hand, and are daily adding to our stock almost every article wanted by the farming community, among which may be enumerated the following.

OUR PREMIUM THRESHING MACHINE, with recent improvements, which received Three First Premiums at the Talbot Co. Cattle Show, held in Easton, Nov. 1850, where all the most improved machines were in competition.

HORSE POWERS.—Of these we have various sizes and patterns, both Lever and Endless Chain. The lever power varies according to size and pattern, from $75 to $130—the Rail Way, or Endless Chain Power, one Horse Power, price $75—two Horse Power, $100.

STRAW CARRIERS which received the first premium at the Talbot Co. Show, 1850; price, $15, $18 and $20.

PREMIUM WHEAT FANS.—Such are the improvements which we have adapted to this great labor saving machine, that it now stands a "*ne plus ultra.*" It will be remembered that this is the Fan which received the First Premium at the 3d Annual Cattle Show held in Baltimore, 1850. Price $25 to 30.

STRAW CUTTERS.—We have on hand a great variety of these articles, embracing the Cylindrical Box, an excellent article for general farm purposes. Price 25 to $40.

Ruggles, Nourse, Mason & Co.'s Raw Hide Repeating Hay and Straw Cutter, from $8 to 30.

Smith's Straw and Stalk Cutter. Price $10.

CORN SHELLERS of all the most improved varieties, varying in price from $3 to 30.

CORN AND COB CRUSHERS.—Of these, we have two varieties; one an excellent article for farm purposes—the other intended for breaking the cob sufficiently for Mill Burrs. Price $30.

Corn Mills for horse power, and warranted equal, if not superior to any similar article ever offered to the public. Price rom $85 to $125.

Harrows of all kinds and varieties. Price from $5 to 20.

Cultivators made with cast iron and steel teeth, expanding or plain. Price from $4 to 6.50.

Vegetable Cutters, for cutting Beets, Pumpkins, &c. This is a very useful article, and should be in the possession of every stock feeder. Price $15.

Iron Rollers of various sizes. Price from $35 to 60.

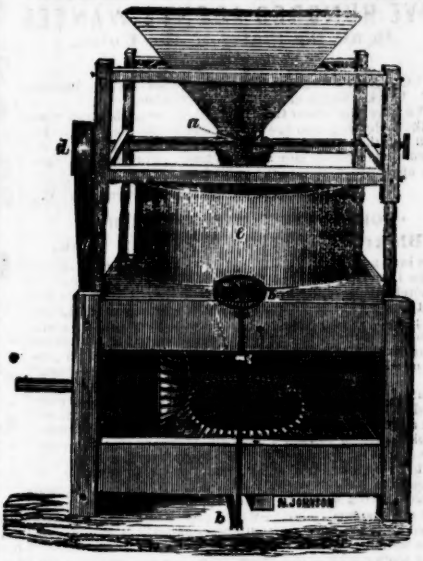
PLOUGHS.—We are constantly manufacturing and receiving all the most improved and valuable Ploughs, suitable for every section of country; among which is the *Premium Delaware Plough*, which for beauty of model, construction and workmanship, cannot be surpassed; at the same time combining greater strength, durability and economy than any other similar article. Also, the Deep-Tiller, a Plough well suited for the deep ploughing so universal among the leading agriculturists, and from the peculiar form of the mould, its draught is made light and easy.

Sausage Cutters and Stuffers.—These articles, intended for cutting and stuffing sausage meat, should be in the possession of every lover of good sausage. They are both light and portable, and will cut, with a small boy, easily 60 lbs. per hour.

We respectfully request our friends and the public generally, to give us a call before purchasing, as we are determined to sell on the most reasonable terms.

HAMBLETON & DIDIER,
No. 57 Calvert st. and 57 Cheapside,
Dec. 1 near Pratt street, Baltimore.

SINCLAIR & CO'S. CORN MILL.



THE above figure shows the construction of SINCLAIR & CO.'S *CORN MILL*, which received the *First Premium* at the late Talbot Co., Md. Agricultural Fair, and also the highest meritorious report by the Prince George's Agricultural Society, held last October. They are generally made with 30 inch French Burr and Cologne Stones, which gives the best surface for making good corn meal and for rapid performance. They are also equally valuable for grinding chop for feeding stock, buckwheat, &c.

At the Maryland State and other late Agricultural Fairs held in this State, they were driven by four large horses, applied to our best Sweep Horse-Power, and ground full seven bushels of corn meal per hour; our estimate, however, of their capacity, is 4 to 7 bushels—quantity ground depending on circumstances, amount of power applied, &c. To be more definite (as regards power required to work a 30 in. Mill) we remark that it requires about the same or less than an ordinary size Threshing Machine.

Price for the 30 in. French Burr Stone Mill, $135
do do Cologne do 110

Price for Sweep Powers suitable for the above, also for Thrashing, &c., 100 a 135

Also for sale, our *Premium* Corn and Cob Crushers, an excellent and simple machine; grinds with light draught 7 bushels of corn and cob per hour. Price $30.

The same machine, with fixtures for grinding corn for feeding stock, $32.

Small cast iron (Negro Hominy) Mills, $9 a 10.

Single and double iron spout hand power Corn Shellers, $10 a 16.

Vertical or *Negro's Own* Corn Sheller, $16.

Cylindrical or Virginia Corn Shellers, for hand or horse power—best for medium or large crops. Price $30.

Gold-borough's Corn Sheller and Husking Machine $40.

Smith's Patent Columbiad ditto, 55.

Cylindrical Straw Cutters, 4 sizes, and no doubt the best straw, hay and fodder Cutter in the U. States. Price $25, 30, 37 and 45.

Same Machines, with Corn-stalk Lacerators and Grinders attached—$36, 45 and 55. At these prices, the Cylindrical Straw Cutters combine all the machinery necessary for cutting as well as putting the corn-stalk in fine feeding order.

Vegetable Cutters. Price $15 a 20.

Sausage Cutters, cutting 75 a 100 lbs. per hour. Price $7.50 a 10.

Sausage Stuffers; $5 a 6.

Cast iron Cauldron and Furnaces, for boiling food for stock and other farm purposes. Price $15 a 25.

Rogers' Corn-stalk Cutter and Grinder. Price $30.

For particulars see our Catalogue for 1850.

R. SINCLAIR, JR.'& CO.,
Dec. 1 No. 62 Light street.

$500 TO $2000 A YEAR.

FIVE HUNDRED AGENTS WANTED

In all the States of the Union,

Including California,

TO CANVASS for the following Important and Valuable Works, which are sold by subscription.

We have now about two hundred Agents in the field, many of them clearing from *two to eight dollars per day.* It will be seen that they are all of a very popular and desirable kind, and calculated to please almost every taste. For further particulars apply (post paid) to the publishers,

DERRY & MILLER, Auburn, N. Y.

"HOW A FARMER MAY BECOME RICH."

Blake's Farmer's Every Day Book,

Or how a Farmer can become rich—being sketches of Life in the Country; with the Popular Elements of practical and Theoretical Agriculture, and twelve hundred Laconics and Apothegms relating to Morals, Regime and general Literature; Also 500 receipts, on health, Cookery and domestic economy; with ten fine illustrations, representing the scenes attendant upon Farming, etc., by John L. Blake, D. D., author of "Biographical Dictionary," "Family Encyclopedia," &c.

The publishers respectfully announce that they have undertaken the publication of this large and beautiful work, with a view to supply a *desideratum* that has long been felt—a book for *Every Farmer's Library*—believing that the venerable author has produced a work that is worth its weight in gold to every Farmer's family, that thoroughly peruse it. It is proper to state that Dr. Blake is a *practical farmer*, and has reclaimed a sterile and worn out piece of land into a valuable and productive farm—which experience, with his well known qualifications as an author, peculiarly fit him to prepare a book for farmers.

The work contains 654 pages, large octavo, with a motto surrounding each page. It is printed on fine paper, and bound in substantial imitation Turkey Morocco, gilt back. Invariable retail price, $3.00.

Agents wanted to canvass for the above.

Frost's Pictorial History of California.

The History of the State of California, from the earliest period of her conquest by the Spaniards, to her aquisition by the United States; with an account of the discovery of the immense Gold Mines, and the quantity of Gold already obtained; the enormous increase of population; a description of the Mineral and Agricultural resources of the country; with adventures and travels among the Mines. Also, advice to Emigrants, as to the most desirable *routes* thither. To which is added the Constitution of the State of California, with numerous illustrations, and a Map of California, and the gold mines, in one octavo volume, 500 pages; bound in same style as Mexico War. Retail price, $2.50.

"I am prepared—I have endeavored to do my duty."

The Life of Zachary Taylor,

Late President of the United States, including the closing scenes of his life and death, by H. Montgomery—embellished with a steel portrait and 15 illustrations, in one elegant octavo vol., 463 pages, well printed on fine paper, and bound in substantial morocco, gilt back.

The lightnings may flash, the thunders may rattle,
He hears not, he heeds not, he's free from all pain,
He sleeps his last sleep, he has fought his last battle,
No sound can awake him to glory again."

More than 20,000 copies of the above work have been sold by us, and the demand is unabated. It is allowed by critics, to be the most complete and authentic copy of any of the works purporting to be a Life of the Great Man of the Age. Retail price, $2.00.

A Complete History of the War between the United States and Mexico,

From the commencement of the battles, to the ratification of the Treaty of Peace, containing a concise account of the splendid military achievements and glorious victories of the American Army under Generals Taylor and Scott, and their gallant compatriots in arms—Also a concise account of the New Eldorado, the Golden Land of California, which was annexed to the United States by the Treaty of Peace. Illustrated with 24 portraits and Battle Scenes, and a steel likeness of General Taylor. By JOHN S. JENKINS, author of "The Life of Silas Wright," "Lives of American Generals," etc., etc. The work is bound in elegant substantial morocco, gilt back, and contains 526 pages. A fine Map of Mexico and California accompanies each book.

*** 12,000 copies of the above work have been sold by us, chiefly in New York State. It is pronounced by critics, as the only complete and impartial History of the War extant. Subscription price, $2.50. Jan. 1-1t

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CONTENTS OF THE JANUARY NO.

Locture of E. Ruffin,	221,226	Rep'ts from Top. Eng. Cor.	239
Farm Work,	231	The Shinney Pen,	239
Garden Work,	232	Cecil County Lands,	"
Floral Department,	233	Southern Cultivator,	"
A Suggession, by P. Planter,	234	Jenny Lind in Baltimore,	"
Rye Straw, by W. B. B,	235	Mr. Clement's Adv't.	"
Ohio Board of Agr.	"	Mr. Carroll's Morgan Black Hawk, (cut)	240
Persian Tobacco,	"		
The New Year,	236	Acknowledgements, Bone Mills, Omission of Entries at the Show,	"
State Society's Meeting,	"		
To Correspondents,	"		
The Farmer in Va.	"	State Convention and the Farmers,	"
Ashes for Sweet Potatoes,	"		
Lancaster Co. Agr. Soc.	"	Guano, how applied,	241
The Saturday Post,	"	Nothing is Lost, by E. P. Roberts,	"
Show Grounds for State So.	237		
Horticul. Soc. of Md.	"	Fish Compost,	242
Phila. Agr. Soc.	"	Poxzolona vs. Guano,	243
Kentish & Co's. Pre. Guano	"	Apple and Potatoes as food,	244
Albany Cultivator,	"	Benefit of Claying and Marling,	245
President's Message,	238		
Medley's Dis. Soc.	"	Manures, management of,	246
Eastern Shore Lands,	"	Best breed of Sheep,	247
Affleck's Almanac,	"	Culture of the Parsnip,	"
The Contrast,	239	Weather, Markets, &c.	248